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A RAILWAY TRAIN, AND WHAT IT COSTS.

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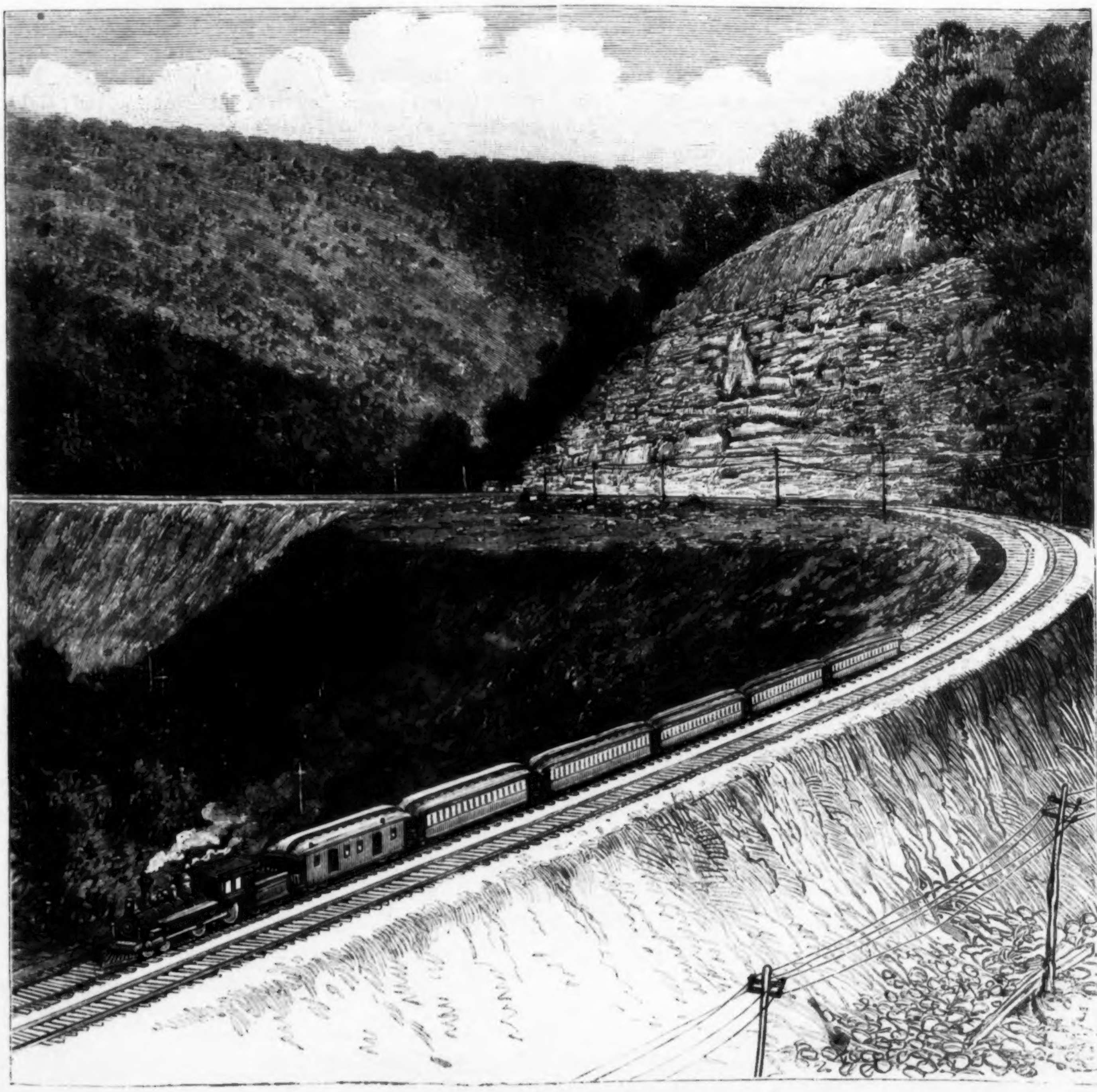
CHAPTER I.—THE DEPARTURE.

ON a bright morning in June, 18—, Mr. Lawrence Wollaston and his cousin John were seated in a carriage driving swiftly down Broadway toward the Pennsylvania Station, where they were to take the train for Chicago. "There!" exclaimed John, in a tone of great satisfaction; "we are fairly off. Now for a good time."



A TRAIN OF CARS AT HORSESHOE BEND.

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"Yes," replied Lawrence, "we have made a good start. A good beginning is very important to any enterprise."

Just then the carriage turned the corner of Courtlandt Street, and the driver, after threading his way with astonishing dexterity through a bewildering maze of heavily loaded carts and vehicles, reined up his horses at the entrance to the Pennsylvania Ferry.

Lawrence had just completed his course at the scientific school of Yale College, and, before entering actively upon his profession as civil engineer, he wished to supplement the theoretical training he had received by observations upon the methods and operations employed in the great workshops of this country. To accomplish this, he proposed to spend some time journeying Westward, visiting and inspecting the large manufactories.

While I have been thus explaining how Lawrence and John had undertaken such a journey, their carriage had been transported across the North River, and was waiting for the boat to be secured to the ferry dock. As soon as this was accomplished the carriage rolled slowly up the bridge connecting the boat with the pier, and in a few moments stopped in front of the waiting-room of the station. John opened the carriage-door, and the young gentlemen stepped out and entered the depot. Here a scene of great confusion presented itself to their eyes. The large room was partially filled with people, who were moving about in all directions in a most bewildering manner. At the further end were a series of doors surrounded by brightly polished railings, and guarded by officials in blue uniforms with brass buttons.

Several of these officers were shouting at the tops of their voices the destinations of the various trains about taking their departure.

"Good gracious!" said John. "How can anybody find out anything here?"

"Yes," replied Lawrence. "Very curiously, the idea of taking a journey seems to have an exciting effect upon the human race, so that a railway station is usually a scene of the direst confusion, and it is only after long experience in traveling that one learns to retain calmness and self-possession. You were very considerate last night when you suggested that we start in good season, so now we have plenty of time, and need not feel in the least degree worried or excited."

"Yes," said John; "and besides, I wanted to see all the people."

"Ah," replied Lawrence, "a railway station is one of the best places in the world to study human nature; and now," he continued, "I'll stay here and look after the bundles while you go and get the tickets."

"All right," said John, pleased at being intrusted with so important a commission.

Lawrence handed him two fifty-dollar bills, and John, going to the window of the ticket-office, said:

"Two tickets for Chicago, if you please."

The ticket agent handed him back two long strips of buff-colored paper and the proper change.

"Well, John," said Lawrence, when the latter returned to him, "you have conducted that negotiation in a very business-like manner, and I think I'll appoint you my courier for the rest of the trip. You may imagine, if you like, that I am an inexperienced foreigner, and that you are conducting me to Chicago."

"Very good," said John. "Now let us go into the cars." And picking up his bag, John started toward one of the doors leading to the trains. He handed his tickets to one of the doorkeepers, who carefully examined them, and then said:

"Forward on your left for the Western express."

After passing through the door, the young gentlemen found themselves in an immense room, where several trains were standing ready for departure. At the side of each was a placard stating its destination. John examined these, one after the other, until he found one bearing the inscription, "Philadelphia, Harrisburg and points West."

"Here's our train!" he cried. "Come along, Lawrence."

John climbed eagerly up the car-steps, calmly and sedately followed by Lawrence.

"I don't think this a very nice car," said John. "Let us go forward into the next one. "Ah!" said he, when they had crossed the platform, "this is very much better. Now let us see. We are to ride southwest; so if we take seats on the right-hand side we shall not have any sun, at least until afternoon; and going to a seat near the centre of the car, exclaimed: "Here is a nice seat, Lawrence. Come and take this."

"Ah," said Lawrence, when he found himself comfortably established; "you make an excellent courier."

In a few moments the train started, and for some time the young gentlemen were occupied in watching the scenes that swept swiftly by the window. On leaving the station the train slowly passed through the streets of Jersey City, and traversing the cut through Jersey Heights, ran with increasing speed out on the long levels of the marshes. In a few moments Newark was reached, but the train, without slackening its speed, thundered past the station and rushed into the open country.

"Now, Lawrence," said John, after he had become a little tired of watching the scenery; "what shall I do about my studies to-day? You know that father wished me to study some every day."

"Ah," replied Lawrence; "I didn't know but you were going to forget all about that."

"No," said John, shaking his head, "I've too much regard for my credit to do that."

"Or," continued Lawrence, "you might regard this as one of your days of failure. You know you have an allowance for that."

"No," replied John, "I am determined not to have any failures."

"Very good," said Lawrence. "Then I'll tell you what I'll do. During the day I will give you a sort of lecture, and before we get to Chicago you may write out a recapitulation."

"What is a recapitulation?" asked John.

"A recapitulation," replied Lawrence, "is a brief and concise statement of the principal points of the subject under discussion."

"Well," said John, rather doubtfully; "I should like the lecture very much, but the car shakes so that I don't believe I could write anything."

"You can make notes in pencil first, and then copy it when there is a steady place on which to write," said Lawrence.

"I can do that very nicely," said John.

CHAPTER II.

LAWRENCE'S LECTURE.

"LADIES AND GENTLEMEN" (began Lawrence, in rather a pompous tone): "The subject of my address this morning is '*Modern Transportation Facilities.*'"

"Oh, my!" exclaimed John, in an undertone. "What long names."

Lawrence, however, paid no heed to the interruption, but continued:

"It would scarcely be supposed, from the present enormous development of the railway system in all civilized countries, that it is but sixty years since the first steam railway was put into practical operation. I say steam railway advisedly, because the idea of employing the smooth surface of blocks of wood, stone or other material upon which the wheels of a carriage or cart could roll with diminished friction is exceedingly ancient. In fact, traces of constructions of this kind have been discovered among the earliest works of the Egyptians. But, as I have said, the application of steam-power to the transportation of goods and passengers, with the consequent growth of the modern railway systems, with their vast and complicated organizations, and the investment of a very large part of the world's capital, dates back but little more than half a century.

"It is scarcely possible to discover who really first propounded the idea of steam propulsion; but now, ladies and gentlemen, we will have the room darkened, and, by the aid of the lantern, we will depict upon the screen the earliest device upon record of steam locomotion."

Here Lawrence drew a small letter-book from his pocket, and, taking out a picture, held it up so that John could see it. Lawrence did all this with a perfectly grave and serious expression of countenance, just as if he were addressing a highly scientific audience in the Academy of Music.

"You have before you, ladies and gentlemen, the representation of a device originated by Sir Isaac Newton, in 1680. It consists of a carriage of four wheels, supporting a furnace D (Fig. 1), over which is placed a large globular boiler B. From the boiler extends backward a pipe C, in which is placed a valve F, which, by means of the rod E, is under the control of the driver at A. The water in the boiler being converted into steam by the fire, was allowed to escape through the nozzle of the pipe C, and, by the reaction of the escaping steam, the carriage was supposed to be driven forward. It is doubtful if this contrivance was ever put into actual operation, and still more improbable that it could have ever been practical.

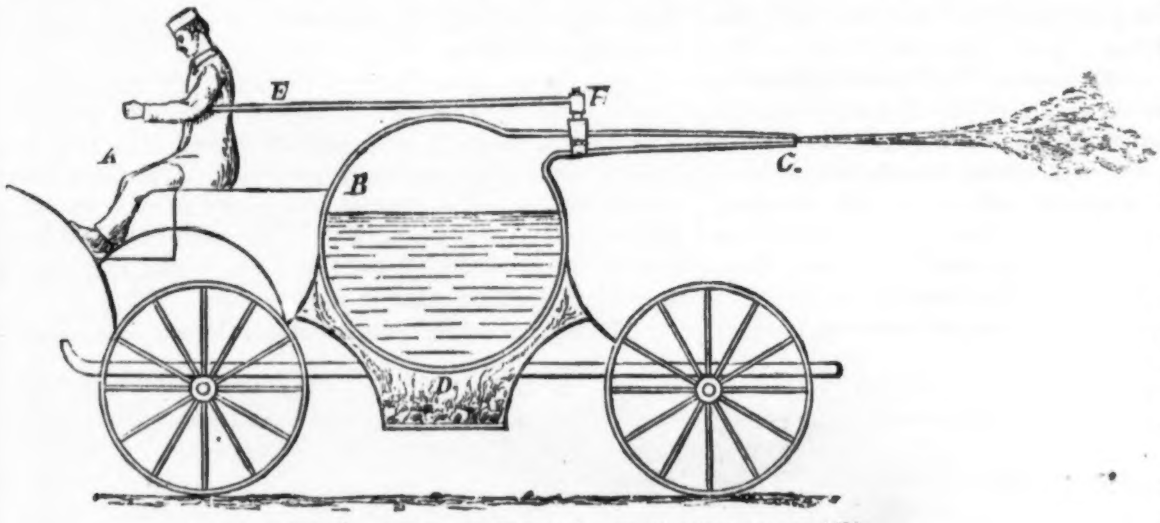

FIG. 1.—SIR ISAAC NEWTON'S STEAM-CARRIAGE OF 1680.

"The first successful steam-carriage was constructed by Joseph Cugnot, in 1769; and it is curious to note the terms by which the invention was described to the French Academy.

"'The secretary read a note sent by Citizen Bonaparte, relating to a carriage moved by steam. Citizens Coulomb, Perrier, Bonaparte and Prony are commissioned to make a report upon this machine, and to be present at the trial to be made of it, and, at the same time, to present their views upon the best method of applying the action of steam to the carriage of burdens.'

"About the same time, Dr. Church, an Englishman, a resident of Birmingham, built a steam-vehicle which ran on the ordinary road between London and Birmingham, and attained a speed of nine miles an hour. Now, ladies and gentlemen, we have before us, on the screen, the steam-omnibus of Dr. Church (Fig. 2). These experiments largely directed public attention toward improvements in locomotion; but very little was practically accomplished until 1825, when a railway was constructed between the towns of Stockton and Darlington, in England.

"It was at first proposed to run the cars on this road by means of horses, but at this time the celebrated engineer Stephenson had attracted considerable attention by some locomotives built for hauling coal from the coal mines, and the directors of the new road applied to him to construct some machines for them. It was his assertion that he could build a locomotive to run twenty miles an hour. Yet, at that time, the famous English journal, the *Quarterly Review*, is quoted as saying: 'What can be more palpably absurd and ridiculous than the prospect held out of locomotives traveling more than twice as fast as stage-coaches?' Mr. Stephenson was a Scotchman, and one day, when under examination before a committee of the House of Commons, was asked: 'Suppose now, one of your engines to be going at the rate of nine or ten miles an hour, and that a cow were to stray upon the line and get in the way of the engine. Would not that be a very awkward circumstance?' 'Yes,' replied Stephenson; 'varra awkward for the coo.'

"Notwithstanding all of the opposition to the new machine, Stephenson built, in 1829, the famous *Rocket*, which, ladies and gentlemen, we will now place upon the screen." (Fig. 3.) Here Lawrence took another picture from his letter-book and held it up for John's inspection.

"This little engine is historic, and formed the general type from which all of the European locomotives have since developed. It weighed about four and one half tons, and, with thirteen tons of freight, attained a speed of twenty-nine miles an hour. The success of the *Rocket* assured the rapid development of steam transportation, and engineers and mechanics all over the world at once turned toward it their attention.

"The roads in America, however, presented far greater obstacles to the advancement of the new discovery than did those of Great Britain. English roads were essentially straight and level lines, while in this country it was necessary to climb mountains and turn sharp corners. It is to Peter Cooper that the credit is due for the construction of the first American locomotive capable of surmounting these obstacles. This machine was built for the Baltimore and Ohio Road, to demonstrate the

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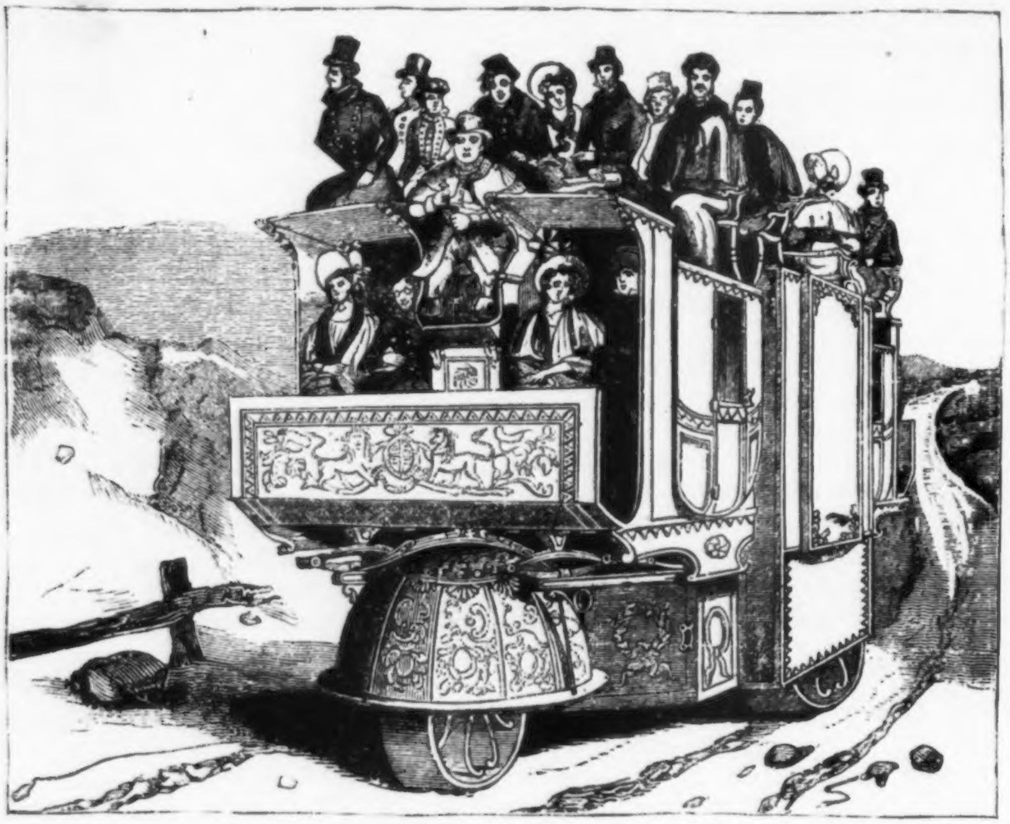


FIG. 2.— DR. CHURCH'S STEAM-OMNIBUS.

practicability of the steam transportation of merchandise on curved roads with heavy grades. The trial trip of this engine, hauling a car filled with the directors of the road, is now before you. (Fig. 4.)

"About 1830, much interest was felt in this country in the success of the English railways. Mr. Franklin Peale, of the Philadelphia Museum, applied to Mr. Baldwin, a skillful mechanic of that city, to construct a model locomotive, for exhibition in the Museum, and on the 25th of April, 1831, the miniature machine was placed in operation on a circular track of pine boards covered with hoop iron. Two small cars, with seats for four passengers, were provided, and the novel spectacle attracted crowds of spectators. The success of the model was so great that Mr. Baldwin at once received orders for machines on a large scale, and, relinquishing his business as a machinist, he founded in Philadelphia the Baldwin Locomotive Works, one of the largest establishments devoted to this branch of manufacture. Nearly nine acres of ground are occupied by the works, and a force of about three thousand men is constantly employed. At present ten locomotives a week can easily be constructed."

"Oh, Lawrence!" said John; "can't we stop there and make them a visit?"

"Well," said Lawrence, "I hope to arrange that on our return from Chicago."

"Now, ladies and gentlemen," he continued; "we will throw on the screen one of the early Baldwin locomotives, constructed in 1846 (Fig. 5). By comparison with the former view of the *Rocket* you will notice that Mr. Baldwin made some striking changes in the appearance of the machine, and established a general design, which has been largely followed in all machines of American manufacture. Such, very briefly, was the history of the inception of the locomotive engine, which is probably one of the greatest inventions in the world. In comparison with the massive and ponderous machines of the present day, the locomotives of Stephenson and Peter Cooper seem but little more than toys.

"Now we will place on the screen a Baldwin passenger express engine (Fig. 6). It will be noticed that there are only two driving-wheels on each side, but these are very large in diameter, so that a high speed is easily attainable.

"Our next view shows a Baldwin 'Consolidation' freight engine (Fig. 7). Observe that here there are four drivers on each side, instead of two. In this case the driving-wheels are much smaller than in the express engine, and therefore much less speed can be realized. Yet, as a far larger proportion of the weight of the locomotive is concentrated on the drivers, the machine is capable of hauling greater loads.

"The next picture, ladies and gentlemen, is a consoli-

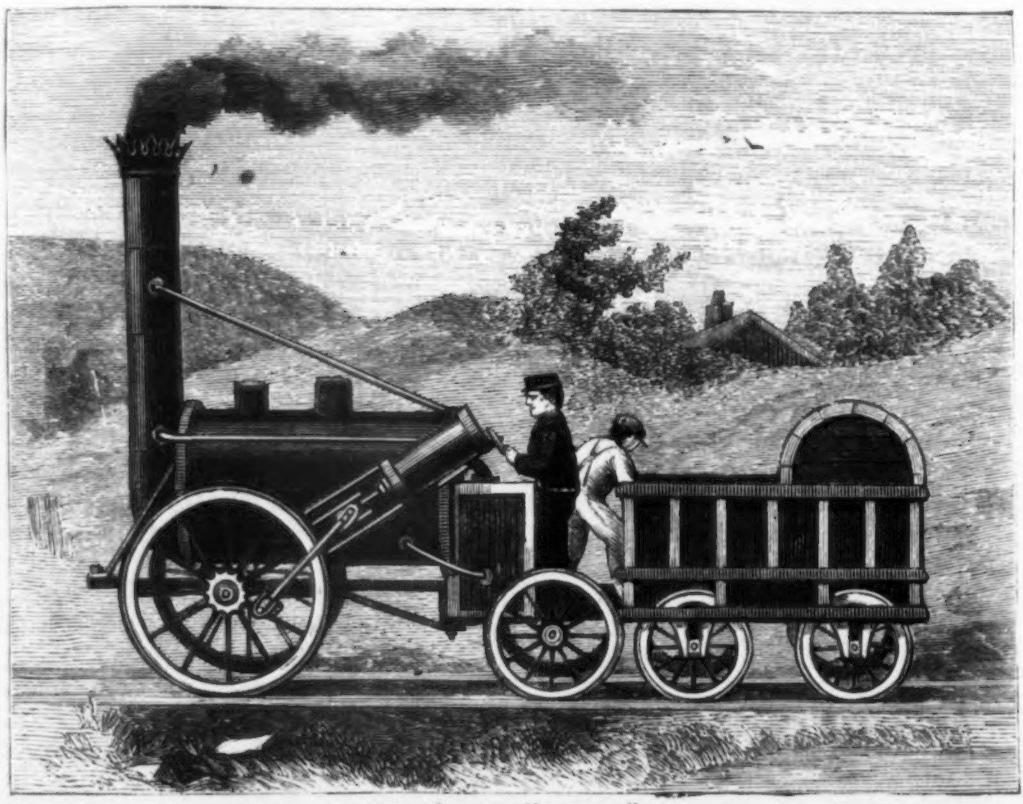


FIG. 3.— THE "ROCKET."

dation locomotive designed for the Philadelphia and Reading Railway (Fig. 8). In the plan of this machine it may be noticed that not only the weight of the locomotive proper, but also that of the tender, is concentrated on the driving-wheels, so a much greater weight is usefully employed in promoting the adhesion of the driving-wheels on the track. Here is an English express engine just completed for the Great Western Railway (Fig. 9). One is at once reminded of the old *Rocket*, and it is very obvious that traces of the Stephenson design still exist. This locomotive has but one driver on each side, but this is very large, as the machine is intended to develop high speeds for passenger and mail service between London and Liverpool.

"So much, ladies and gentlemen, for the history and general characteristics of the locomotive. The details of the machine and its special appliances will be treated in the next session." Just then the train rounded a curve, and sweeping over a majestic bridge, crossed the Schuylkill River, and a few moments later came to a stop in the magnificent Pennsylvania station in Philadelphia.

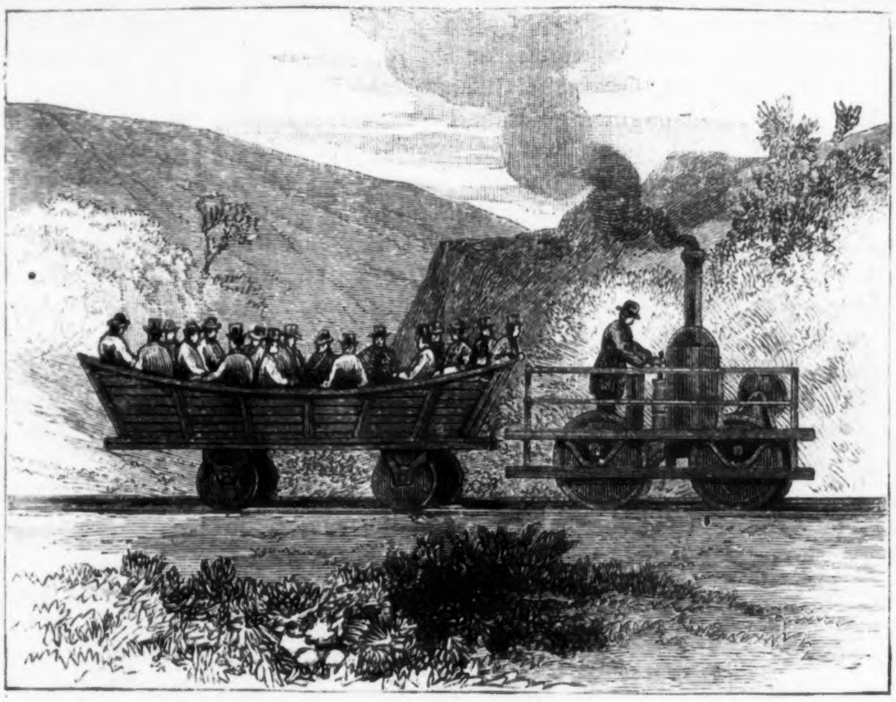


FIG. 4.—PETER COOPER'S LOCOMOTIVE.

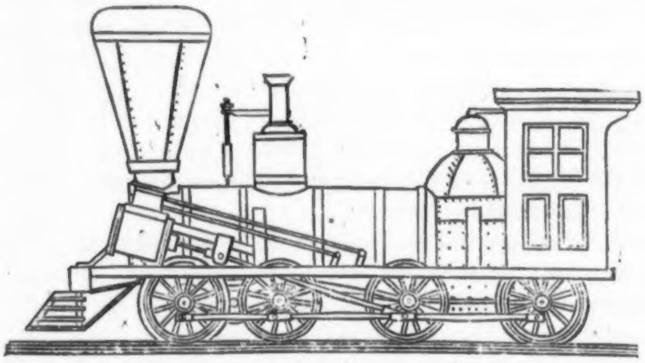


FIG. 5.—"BALDWIN" LOCOMOTIVE OF 1846.

"I wonder how long we stop here," said John.

"I don't know," replied Lawrence; "but you might go and find out."

John started off, and presently returning, informed Lawrence that the train staid eight minutes.

"Now," said John, "let us go out and take a walk on the platform, so as to see the station."

Descending from the car, Lawrence and John found themselves under an immense arched roof covering a building several hundred feet long, and accommodating a dozen or more railway tracks. Between each of the tracks was a long, narrow platform for the convenience of the passengers going to and from the various trains. Several of the tracks were already occupied, some by trains which had apparently just arrived, and others by those awaiting the signal to depart. Many people were on the platform, some of them hurrying to and fro in an eager, excited manner, seemingly fearful lest they should not find the car they were seeking; while others, with the air of experienced travelers, were slowly pacing to fro, idly watching the numerous officials as they pursued their various avocations. The roof of the station was supported on very strong but light iron arches, that sprang from wall to wall in a single semi-circular span, giving a very high and lofty appearance to the building.

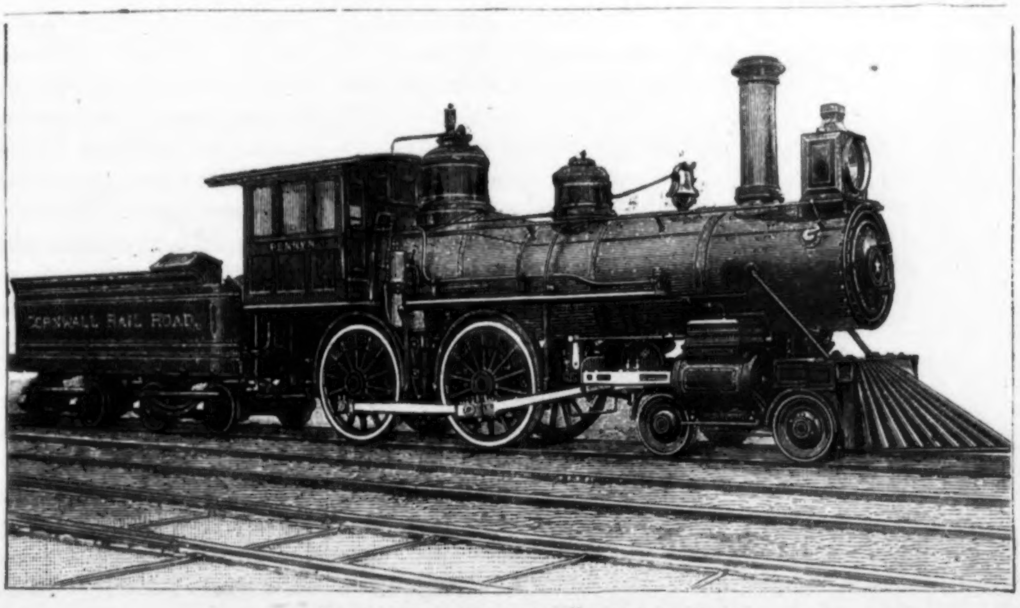
For some minutes Lawrence and John examined the scene around them with the greatest attention and curiosity.

"John," said Lawrence, "what do you suppose they have made this roof so high for?"

"Why," said John, hesitatingly, "I'm sure I don't know, unless they did it for appearance's sake."

"I doubt that," returned Lawrence; "as room in a great city is too valuable to be wasted unnecessarily."

Just then an incoming train rolled along on the track beside them, the locomotive sending up a great cloud of steam and smoke.


CORNWALL RAIL ROAD.
FIG. 6.—MODERN "BALDWIN" EXPRESS ENGINE.

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"There!" said Lawrence; "that engine has answered the question for you."

"Why," said John, "I don't see that."

"Well," rejoined Lawrence, "I suppose every day nearly a thousand engines go in and out of this depot, each one of which pours out an immense volume of smoke, just as you saw this one do a moment since; and if the building had a small, low roof, passengers would be almost suffocated, to say nothing of the confusion which would ensue from so thick and murky an atmosphere. But by constructing a lofty roof there is plenty of room for the smoke to pass away without annoyance or discomfort to travelers."

While the young gentlemen were talking about the roof, a gang of three or four men passed them. These were clad in rather greasy-looking blue "overalls," and each one carried in one hand a very peculiar-looking hammer, and in the other a queerly shaped can, something like a coffee-pot, excepting that the spout of the pot was furnished with a blazing lamp-wick, which flared and sputtered, giving out a dim and smoky light. The hammers were peculiar in having a very small head on the end of a handle, some three feet long. The men stepped down off the platform on to the track, and, crawling under the cars, commenced to pound the wheels with the long-handled hammers.

"Lawrence," said John, "what in the world are they doing that for?"

"They are inspecting the car-wheels," replied Lawrence. "You see, during the last two hours, we have traveled nearly one hundred miles, and, while the car seems to ride very smoothly and easily, at the same time every little inequality in the track gives a sharp blow to the car-wheel; and, during the one hundred miles, each wheel has probably received a good many thousand blows, so it is not at all unlikely that some one of them may have become cracked. The inspection gang, with their long-handled hammers, go around and carefully tap all the wheels, judging by the sound whether the wheels are sound or not."

"Oh, Lawrence," exclaimed John, "what a pun!"

Lawrence smiled a little at this remark, and then said, "Now listen."

As he spoke, one of the inspection gang came close beside them, as they were standing near the truck of one of the cars. As he struck the wheels successively, they gave forth a clear, ringing note, almost like that of a bell. Suddenly, however, one wheel on being struck gave out a dull, earthy thud, totally different from any of the others. The workman struck the wheel a number of times in various places, and then, stooping down, he examined it very carefully with his light. He then shouted out:

"Say, Bill! Tell the boss there's a cracked wheel on the express."

In a minute or two several men made their appearance, and, after investigating matters, the foreman said:

"Bill, go and tell the yard-master to send down another coach."

Presently the car that they were looking at gave a little jerk, and rolled away.

"Why, Lawrence," exclaimed John, "I do believe they are carrying off our car, and," he added, in a tone of great consternation; "all our bags are in it. What shall we do?"

"I'm sure I don't know," replied Lawrence, in a perfectly calm and quiet voice. "I'm nothing but an inexperienced foreigner, you know, and depend entirely upon my courier to get me safely to Chicago."

John looked rather perplexed and distressed for a moment, and then said:

"You might advise me, any way."

"Oh, yes," replied Lawrence; "I will do that with the greatest pleasure. In such an admirably managed system as the Pennsylvania Railroad, where the breakage of a car-wheel is probably a matter of frequent occurrence, I have no doubt some good provision is made for the safety of the passengers' luggage when it becomes necessary to exchange cars. There is a station-master over there. Perhaps you might go and ask him about it."

John looked in the direction indicated by Lawrence, and saw a blue-coated official with the word "Station-master," in gold letters, on his cap. In answer to his inquiry, the station-master told John to give himself no concern; that the porters connected with the station would take good care of the luggage, and shortly, another car would be along to take the place of the injured one.

As he finished speaking, John heard a rumbling behind him, and, turning around, saw the car just being attached to the train. He ran immediately to Lawrence, and hurried him on board. Here John was much delighted to find their luggage in almost identically the same place in which they had left it.

"Well," said he, in a tone of gratification and relief, "this certainly is an excellent system. If I could find the porter who took such good care of our bags, I should like to give him a good big fee."

Just then a loud gong struck, and, with an "*All aboard!*" from the conductor, the train slowly started, and was soon again swiftly rolling Westward.

CHAPTER III.

THE LOCOMOTIVE.

A LOCOMOTIVE engine may be said to consist of three parts or organs.

1st, An apparatus for generating steam; 2d, An engine for utilizing the force of the steam; and 3d, The driving mechanism, by means of which the power developed by the engine can be employed for transportation.

The rear end of American locomotives is usually covered by a wooden framework or cab, which serves to protect the engineer and fireman from the weather. On looking into this cab as a locomotive is standing at a station, one may usually see, through an open iron door, the glowing coals in the furnace. Under the cab the bottom of the furnace extends downward, and, almost touching the track, is arranged to form a closed ash-pit for the reception of the hot coals and embers as they drop through the grate bars, thus preventing them from setting fire to the wooden ties. The main bulk of the engine is occupied by the boiler, which forms the long cylindrical iron case extending from the cab forward to the cowcatcher. The boiler is usually composed of very strong and tenacious plates of steel, firmly riveted together so as to be steam-tight. For appearance's sake, and to prevent loss of heat by radiation, it is covered with sheets of polished Russia iron. Longitudinally through the boiler are placed a number of tubes, communicating with the furnace at one end and terminating in the smokestack at the other. These tubes are arranged to receive the flame and hot gases from the fire, and being constantly surrounded by the water of the boiler, they very largely increase the heating surface, thereby rendering it possible, in a small space, to generate steam sufficient to meet the demands of the cylinders. Such a boiler is denominated a tubular or locomotive boiler. A comprehension of its construction may perhaps be facilitated by reference to the accompanying illustrations (Figs. 10 and 11), sections, longitudinal and transverse, of an English express engine. The space A A is occupied by the furnace or fire-box. The walls are made of double plates of steel, riveted together in the strongest manner, and designed to allow a free circulation of water, thereby providing the largest heating surface. From the end of the fire-box the tubes B extend forward to the smokestack. On the top of the boiler stands the steam dome D, the object of which is to secure a supply of dry steam for the cylinders. As the boiler is usually kept nearly filled with water, the jolting and shaking of the locomotive would be very likely to cause much of the water to find its way into the cylinders, provided the mouth of the steam-pipe were placed near the water-level. To obviate this, the end of the steam-pipe O is placed high up in the dome. At the end of this pipe is situated the throttle-valve V, which, by means of the rods X X and the crank Y is under the control of the engineer in the cab. After the steam has done its work in the cylinders it is allowed to escape into the smokestack by means of the pipe N. As each cylinder-full passes into the stack it gives rise to the familiar "choo-choo" of the locomotive; and here the steam is made to do an additional work, for each puff, as it passes through the funnel, draws through the furnace a corresponding puff of air, serving to fiercely fan the fire. In order to save weight, locomotive boilers are made as small as possible, and require to be constantly furnished with fresh additions of water as fast as the steam is used. Supplies of fuel and water are carried in the tender accompanying the engine, or in a receptacle surrounding the boiler. At frequent intervals, however, it is necessary to re-supply the tender by stopping at a water station. A method has been devised whereby this loss of time may be avoided. Midway between the rails is placed an iron trough several hundred feet long. This trough is kept constantly filled with water, and as the train flies by a pipe is lowered from the tender and dropped into the water. The tank is thus filled while the train is in motion.

A curious device called, an "injector," is now being rapidly introduced for the purpose of forcing water into the boiler against the steam-pressure. Fig. 12 is an illustration of this little contrivance, and Fig. 13 a section, by the aid of which I hope to make its seemingly anomalous action comprehendible. There are three openings into the injector. Through the upper one steam can be admitted from the boiler. The lower one is connected with the water supply, while the end orifice is also connected with the boiler. By pulling the handle H the little valve A is opened, steam is admitted, and expanding as it passes through the orifices C and D, lifts the water through the supply-pipe into the combining tube N N. Now the cool water condenses the steam as it passes through the tube C; but this condensed steam has acquired the velocity due to the boiler-pressure. By condensation its volume has been reduced about nine hundred times, but its velocity remains unchanged; and so, were it not for the friction of the valves and pipes, this condensed steam could be mixed with nearly nine hundred times its weight of water, and still retain sufficient velocity to run right back into the boiler, against the steam-pressure, through the end opening. In practice, however, the pipe and valve friction is so great as to reduce this quantity to about one hundred and sixty times the weight of the steam used. Nevertheless, this is a great saving over ordinary pumps, and from its compactness, cheapness and efficiency, the injector is becoming a great favorite.

The steam-engine part of a locomotive is always made in duplicate, there being two steam-cylinders, one on each side. For this there are several reasons. If there are two cylinders, any accident to one leaves the other in a working condition; able, at least, to slowly haul a train to a station where relief might be obtained. The use of two cylinders, also, enables the force derived from the steam to be directly applied to the driving-wheels on either side; whereas if only one cylinder were used this application would be much more indirect. But the most important reason for the use of two cylinders is to obviate what machinists call "*a dead centre.*" Power from a steam-engine is derived from the pressure of the steam in the cylinder causing the piston to move to and fro. This backward and forward movement is termed a *reciprocating motion;* and, for some purposes, such as pumping, sawing wood, etc., this reciprocating motion is precisely what is needed. But for most mechanical operations, and, very obviously in the case of the locomotive, it is necessary to convert the reciprocating movement of the piston into a rotary motion whereby the driving-wheels may be revolved. Rotation is achieved by placing a *connecting-rod* on the end of the piston-rod, which is, in turn, secured to a crank on the axle of the driving-wheels. The crank and the connecting-rod transform the *reciprocating* motion of the piston into a *rotary* motion of the axle. Suppose the piston is at the extreme end of the cylinder. Evidently the piston-rod, the connecting-rod and the crank are all in one straight line, and no amount of direct pressure on the piston could move it. Mechanics call this position of the system a "*dead centre.*" In the case of stationary engines, care is taken never to stop the engine on the centre; but, should this accidentally occur, a gang of men with a crowbar can readily pry the crank around and set the engine going.

The possibility of such a detention with every stoppage of a railway train would be totally incompatible with the present system of transportation. To obviate this difficulty, the cranks of the two cylinders are set at right angles to each other; therefore, if one crank is on its dead centre, the other is in its most efficient position, and is able to move the train sufficiently to release the former.

The mechanism whereby the steam is permitted to alternately enter first one side and then the other of the cylinder, and, after having done its work, is allowed to escape, so as to prevent opposing any obstacle to the motion of the piston, is very curious. Fig. 14 is a sectional drawing of a steam-cylinder, giving the valve-arrangement. On one side of the cylinder, a sort of a box (V) is constructed, called the steam-chest. A pipe from the boiler keeps this steam-chest constantly filled with steam. From the steam-chest there are two channels of communication leading to either end of the cylinder. A small block of metal (T) is arranged to slide to and fro over the "ports," as these openings into the cylinder are termed. From a fancied resemblance to the letter D, this valve has received the name of the "*D valve,*" and is so designed as to always cover and close one of the ports, while leaving the other open and accessible to the steam. In the illustration, the upper port is closed, while the lower one is open; so that the steam from the valve-chest may now be supposed to flow through the passage G to the under side of the piston D, and force it upward. Any steam which may be on the upper side of the piston is permitted to flow through the upper passageway into the chamber Q, from whence it escapes into the air.

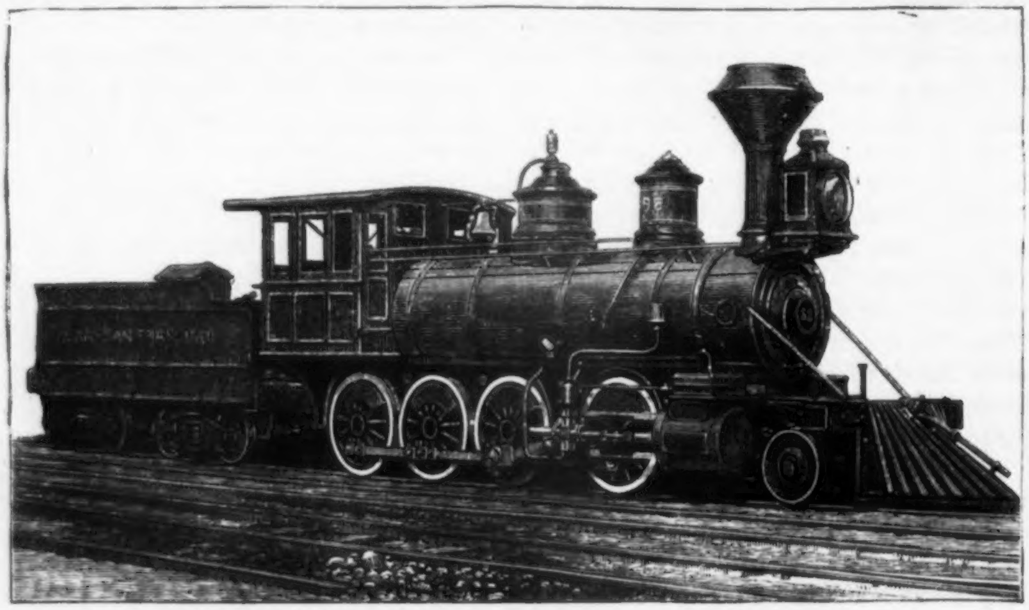


FIG. 7.— BALDWIN " CONSOLIDATION " FREIGHT ENGINE.

As soon as the piston reaches the top of the cylinder, the valve F slides downward, closing the lower port to the steam, but opening communication into the chamber Q, and at the same time allowing the steam to enter the top of the cylinder by means of the upper port. The motion of the valve to and fro is accomplished by connecting the valve-rod M with a short crank or eccentric, placed on the main shaft of the engine. If, however, steam is admitted to the valve-chest, the engine at once starts, and continues to run until the supply is cut off. In a stationary engine designed to run in only one direction this valve-motion is extremely simple. A locomotive, however, must run either backward or forward, and the engineer must have it in his power at an instant's notice to "*reverse his engine.*"

The valve-gear, designed by Stephenson for his early locomotives, so admirably fulfills all requirements, that it is still used with little or no modification. His contrivance is shown in Fig. 15. The cylinder and valve-chest, with steam-pipe to boiler, are seen at the left hand of the illustration. On the main shaft are placed two eccentrics, E and E, which, by means of two rods, B and B, are connected with the block A. This block is furnished with a long slot, in which plays a pin attached to the valve-rod. A system of levers, L Z and M, controls the motion of the block A, so that it may be raised or lowered at the pleasure of the engineer. At present the lever L is in its extreme backward position, and the valve-rod is in a direct line with the eccentric, B. By pushing the lever forward, the valve-rod is brought into line with the eccentric, B. As the two eccentrics are set at right angles to each other, the operation of throwing forward the lever L and lowering the block A serves to change the position of the valve, thus reversing the admission of the steam to the cylinder, and consequently changing the motion of the engine. This admirable contrivance also serves another purpose; for, by setting the lever L at any intermediate point, the amount of motion of the valve can be varied in a like proportion, causing a corresponding difference in the quantity of steam admitted to the cylinder, and giving the engineer a complete control over the machine, permitting him at pleasure to run it rapidly or slowly, backward or forward.

The cylinders of the most powerful locomotives have an area of 314 square inches. Frequently a steam-pressure of 120 pounds to the square inch is used, so that the pressure on each piston amounts to nearly 38,000 pounds, or about 19 tons. The driving-wheels of such an engine are about 12 feet in circumference; therefore, for every mile traveled some 400 revolutions would be made, and, assuming a speed of 20 miles an hour, each cylinder would have to make 133 double strokes per

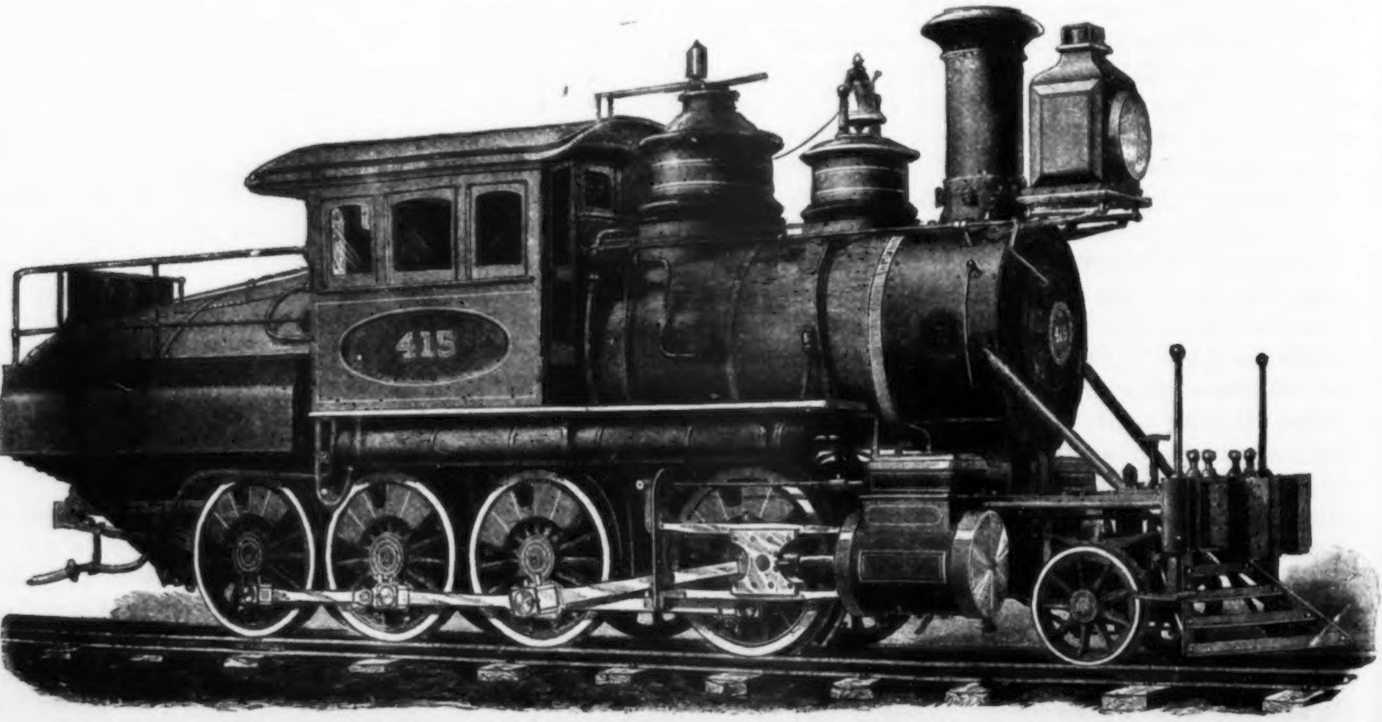


FIG. 8.—" CONSOLIDATION " LOCOMOTIVE, WITH WOOTTEN'S FIRE-BOX FOR BURNING FINE COAL.

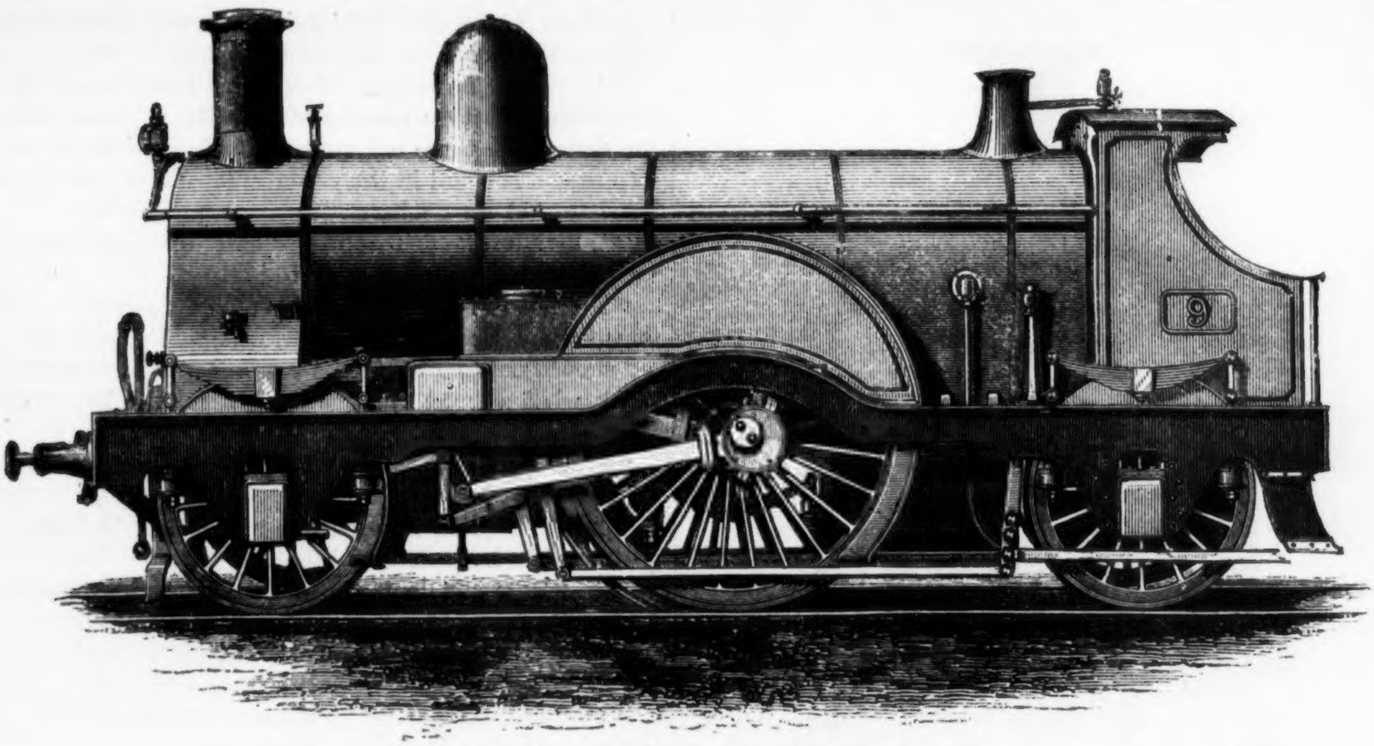


FIG. 9.—NEW EXPRESS ENGINE, GREAT WESTERN RAILWAY.

minute. The cylinders are 26 inches in length, so that each double stroke requires the piston to travel 52 inches, or nearly 600 feet in a minute, under a pressure of 38,000 pounds; and therefore the total force exerted by the steam on both the pistons of a consolidation locomotive in a minute of time is equal to 38 tons moved through 600 feet, or 23,000 tons moved through 1 foot.

From this the mind may picture with what enormous force a railway train moves; and, viewed in this light, the destruction and desolation of a railway accident is not in the least surprising.

CHAPTER IV.

CARS AND THEIR EQUIPMENT.

Just as Lawrence completed his explanation of the locomotive and its workings, the train gradually slackened its speed and rolled into a rather dingy and smoky station.

"Harrisburg!" called the brakeman from the end of the car. "Twenty minutes for refreshments."

"Why!" exclaimed John, in a surprised tone; "can it be possible that we have reached Harrisburg? I thought we didn't get there until after three."

"Well," replied Lawrence, "I should think it fully as late as that now."

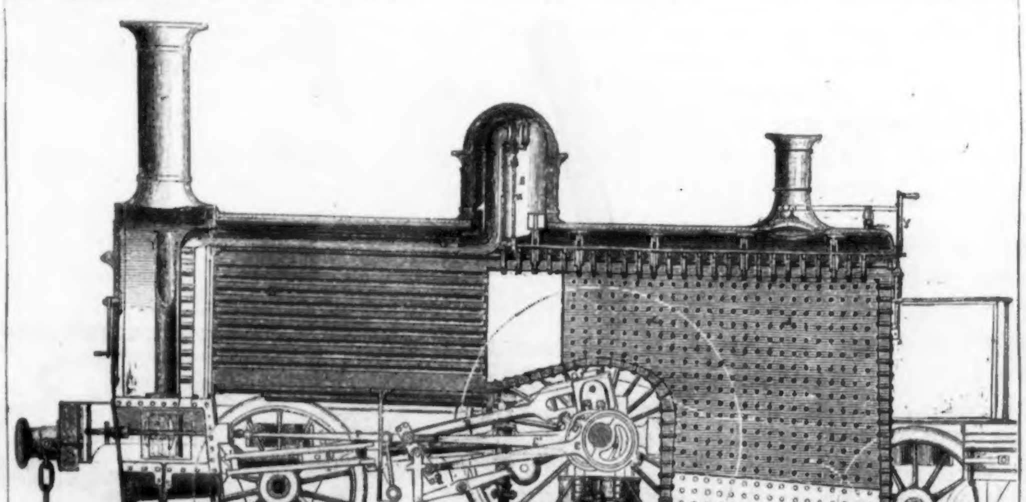


FIG. 10.—LONGITUDINAL SECTION OF LOCOMOTIVE.

"So it is," returned John, looking at his watch. "It is a quarter past three. I have been so interested in hearing about the locomotive that I've actually forgotten to be hungry. Usually when I am traveling I'm always on the lookout for something to eat."

Lawrence laughed, and said he thought John certainly paid him a great compliment, for if he could so interest a boy of twelve in the dry details of a locomotive, his success as a lecturer would be assured. During this conversation the young gentlemen had left their seats, and descending from the car, found themselves in the midst of a hurrying throng upon the platform. The roof of the station was quite low, and as several trains were standing on the track pouring out black smoke, the air was so thick and murky as to render objects quite indistinctly visible.

"See, John," remarked Lawrence; "this is what happens when a railway station has a low, flat roof. I'm sure that the Pennsylvania Company have been very wise to obviate such difficulty in their new station at Philadelphia."

"Yes," returned John; "it is so dark here that I don't know where to go to get anything to eat."

"Well," said Lawrence, "I hear a gong at the other end of the station, and I rather think that there is the proper place to look for refreshments. Still,

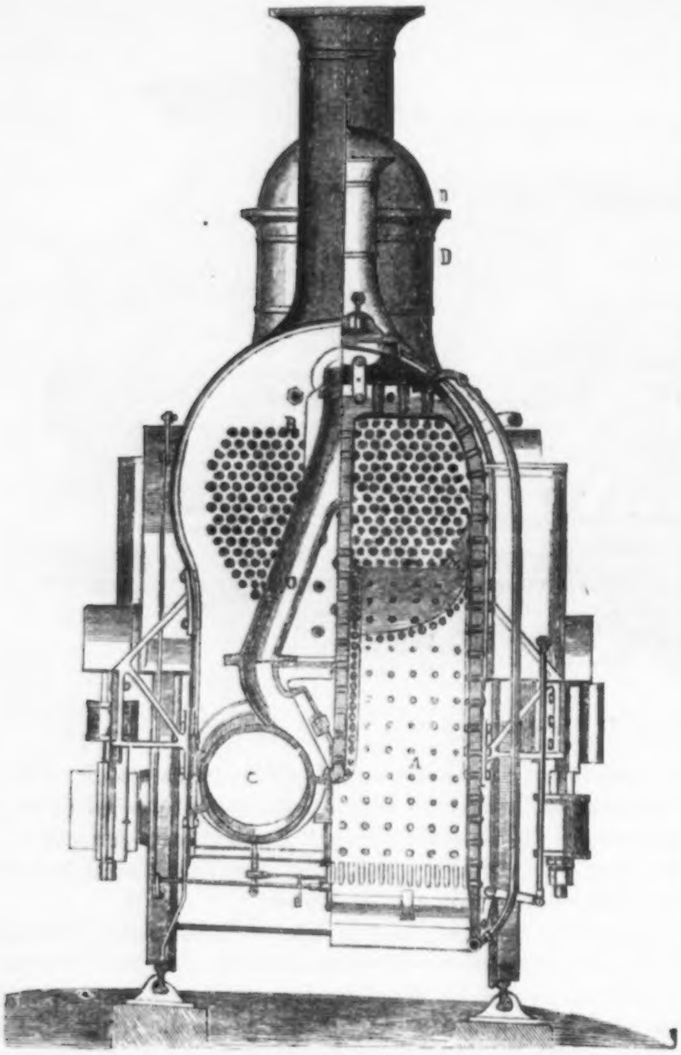


FIG. 11.—TRANSVERSE SECTION OF LOCOMOTIVE.

you can do just as you like, for as you are the courier, I do not feel any responsibility about the details of our trip. But if you wish me to give you a good recommendation when we get to Chicago I should advise you to see that I am well fed."

John laughed, and saying that he would take good care of that, walked rapidly with his cousin toward the sound of the gong. Presently, through the smoke, they saw a large arched doorway, through which tables loaded with eatables were visible, and perceived that the gong sound emanated from a large metal pan, which was being lustily beaten by a colored man.

"Ah!" said John; "that is just what we want, and suddenly I find I have a tremendous appetite."

The young gentlemen took seats at the table, and were soon busily engaged with some roast chicken and cups of coffee.

"There!" said John, after some fifteen minutes of operation too active to permit of conversation, "I feel ever so much better."

Just then a huge bell rang, and the attendant at the lunch-counter shouted:

"Express starts in three minutes!"

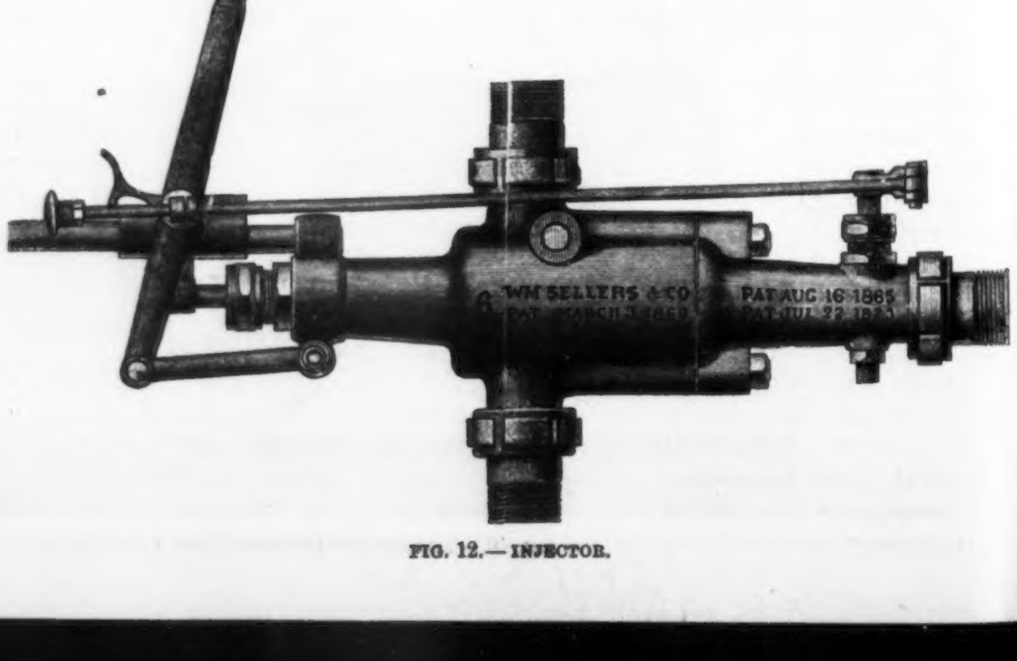


FIG. 12.—INJECTOR.

"Come, Lawrence," said John, scrambling off his stool in a great hurry, "or we shall get left."

"Ah," said Lawrence, in a quiet tone, "one of the first essentials to a successful traveler is calmness. In the first place, three minutes is ample time for us to get into the train; and in the second place, if we should get left it would do no harm."

"Why!" exclaimed John; "if we don't get this train we shall not get to Altoona to-night."

"No, not to-night, perhaps," replied Lawrence; "but on this road the trains run very frequently, and at most we should only be delayed a few hours. And then, just think what a good opportunity we should have to see Harrisburg."

"Yes," said John; "but I should rather not be left, all the same."

"True," replied Lawrence. "It would be better to go on as we had planned."

Just beside the door of the refreshment-room stood a desk with the word "Cashier" over it. As they passed this, a man addressed Lawrence, saying:

"Seventy-five cents for your dinner, if you please."

"Ah," said Lawrence, "you must ask this young gentleman. He has charge of the party."

For a moment John stared at his cousin in amazement, and then handed the cashier a two-dollar bill. During this transaction, Lawrence had stood quietly looking about him, regarding the movements of the other travelers in an interested manner, though perfectly calm and unconcerned.

"Come, Lawrence," said John, when he had received his change; and, walking out of the dining-room, they were soon seated in the cars, rolling away from the smoky station out into the bright sunshine, along the banks of the beautiful Susquehanna.

For about an hour John was busily occupied in watching the scenery from the car-window. Shortly after leaving Harrisburg, the train crossed the Susquehanna on a long bridge, and then swept swiftly and smoothly along the banks of the river, winding in and out among clumps of trees and around the bases of the low foot-hills of the first ridges of the Alleghanies. Every now and then a wider glimpse than usual between trees would afford a view of rolling meadows and fields of young grain, with the river in the distance; and, on the other side, the gently rising banks dotted with cattle, with here and there a substantial farmhouse whose white outlines stood out in the afternoon sunlight in bold relief against the vivid green of the background; all betokening scenes of plenty and prosperity.

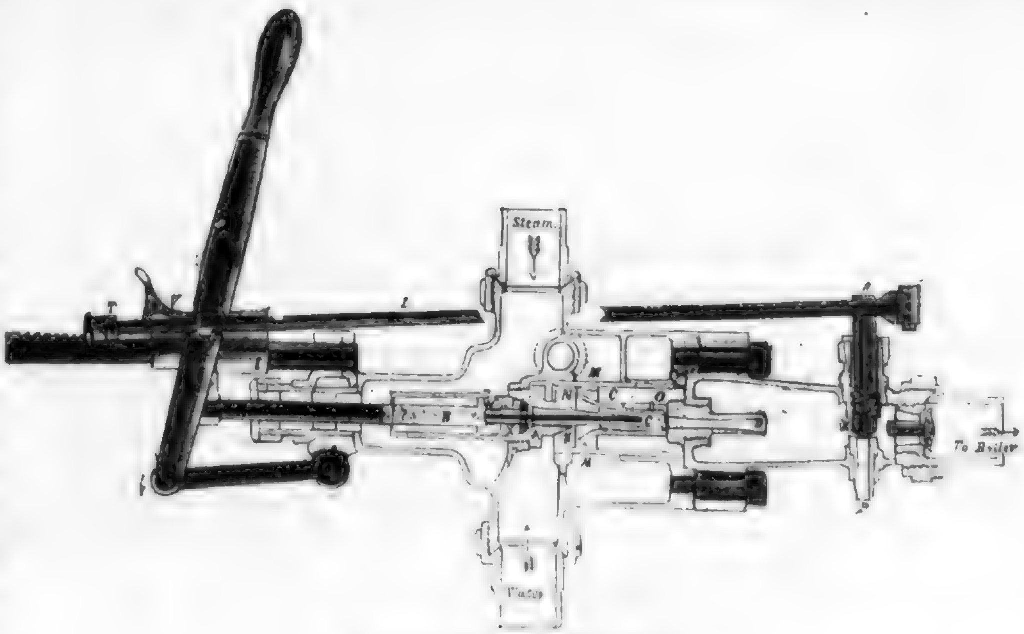


FIG. 13.—SECTION OF INJECTOR.

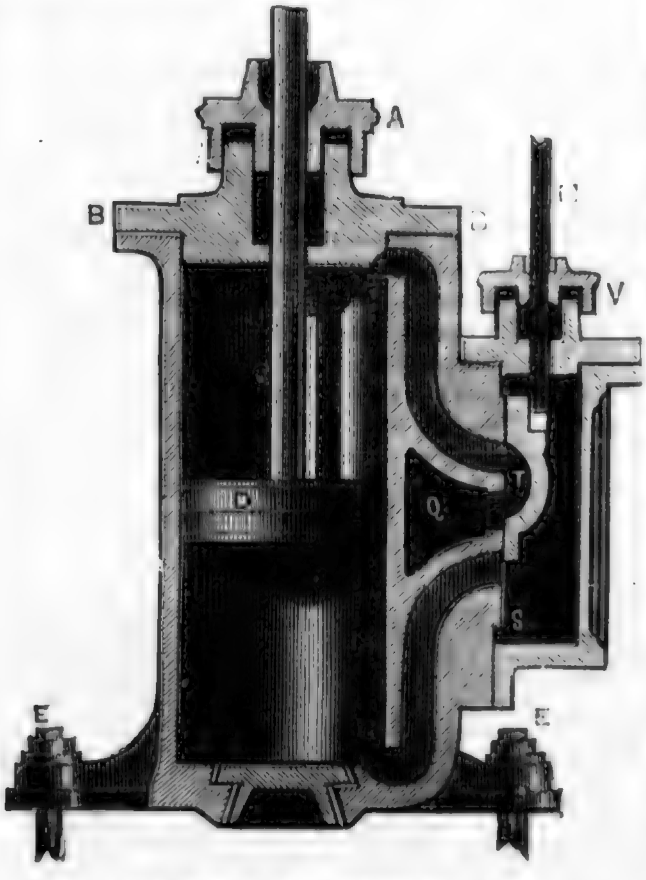


FIG. 14.—SECTION OF LOCOMOTIVE-CYLINDER

"Lawrence," said John, after they had passed some time in silence, watching the scenery, "how much do you suppose such a train as this in which we are riding costs?"

"Well," replied Lawrence, "that is rather a difficult question to answer, because from time to time, owing to fluctuations in the prosperity of the country, the cost of labor and materials varies very greatly. Last year, when I graduated at Yale, I took as the subject of my thesis a railway train."

"What is a thesis?" asked John.

"It is a kind of composition," replied Lawrence. "During the last year that a boy spends in a scientific school, he is expected to select some subject to investigate thoroughly, and about which he is to write an essay or composition; something on the plan of the recapitulation which you are going to write before we get to Chicago; but in your recapitulation you are only expected to give a brief statement of the principal points; whereas in a thesis the author is expected to develop the subject with great care and minuteness."

"Yes," said John, "I should think that would be very interesting. I mean to write a thesis some time."

"That will be an excellent plan," said Lawrence. "This excursion of ours would make a capital basis for a thesis, which you can write when you return."

"Good," said John; "I'll do that."

"I spent as much time," continued Lawrence, "as I could afford in school in studying up from encyclopedias and books of reference the subject which I had selected, and then I wrote to some of the leading manufacturers, telling them my plan, and they very kindly sent me catalogues and photographs. I cut the pictures out, and then wrote my thesis in a little blank-book, putting in the pictures so as to make the subject as clear as possible."

"I wish I could get some pictures for my thesis," said John.

"I've no doubt," answered Lawrence, "that you would be able to find some at the works we intend visiting. I thought," he continued, "that it would be a good plan for me to bring my thesis with me on this expedition, so that I might compare what I had learned in school with the actual practice of the shops."

Here Lawrence stooped down, and, opening his bag, took out therefrom a small leather-covered book, something like a pocket-book.

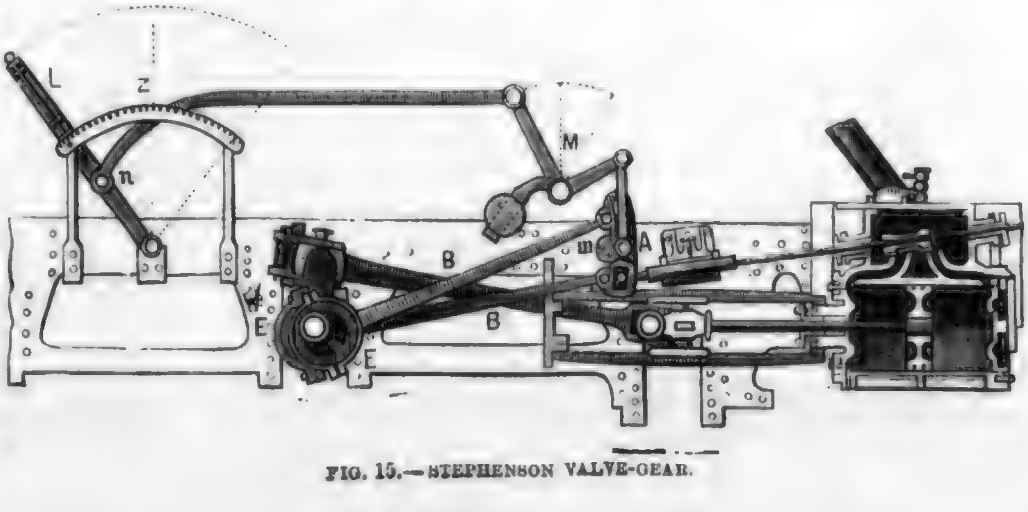


FIG. 15.—STEPHENSON VALVE-GEAR.

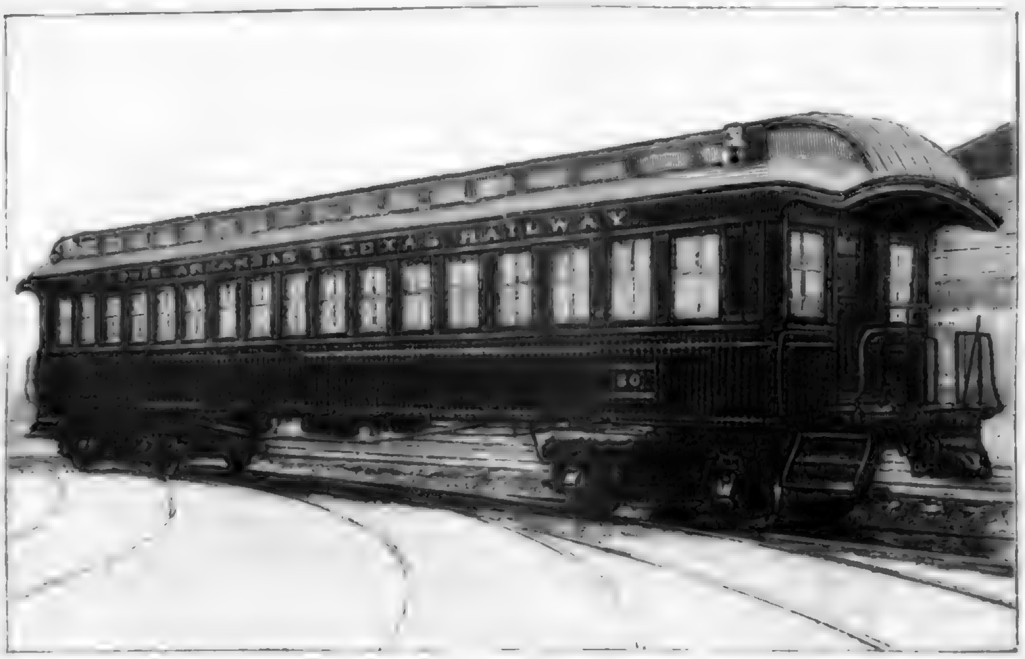


FIG. 16.—PASSENGER-CAR.

"Ah," exclaimed John, "that was where you got the pictures of the locomotive you showed me this morning, wasn't it?"

"Yes," returned Lawrence, smiling; "I put my pictures into the book by cutting little holes in each page to receive the corners of the picture, so that I could always slip it out without any trouble; and this morning, when I was "*lecturing*," I threw the pictures on the screen. Now," he continued, opening his book, "here are some of the statistics which I gathered:

"The cost of locomotives varies considerably with the size and kind, and with the number and variety of attachments supplied, but at present the average price may be stated to be eight to ten thousand dollars. Six months ago I was informed by the Hinckley Locomotive Works the same engine could be purchased for fifteen hundred dollars less; while, in 1882, they were worth seven or eight thousand dollars more.

"Very curiously, all the power of a locomotive to draw loads is derived from the adhesion between the track and the driving-wheels. The early inventors of the locomotive supposed that on a smooth track it would be utterly impossible for an engine to haul a load of any magnitude, and a great deal of money and inventive energy were spent in endeavoring to overcome this fictitious difficulty. Engines were built with cog-wheels designed to gear into cogs placed on the road-bed. It was soon found that these contrivances were quite unnecessary, the simple friction between the driving-wheels of the engine and the track being usually sufficient, on ordinary grades, to enable the engine to haul long and heavily loaded trains. In mountainous regions rack railways, as they are called, having a third toothed rail into which a cog-wheel on the engine matches, have been very successfully constructed. The railways up Green Mountain, on Mount Desert Island, up Mount Washington, and on the Righi, in Switzerland, are the most important constructions of this kind. The Mount Washington road is probably the most famous of all. In this, by means of the third rail, the engine is able to surmount a grade of one foot in three.'"

"Will you explain that to me?" asked John.

"In moving over a horizontal distance of three feet the track rises perpendicularly one foot."

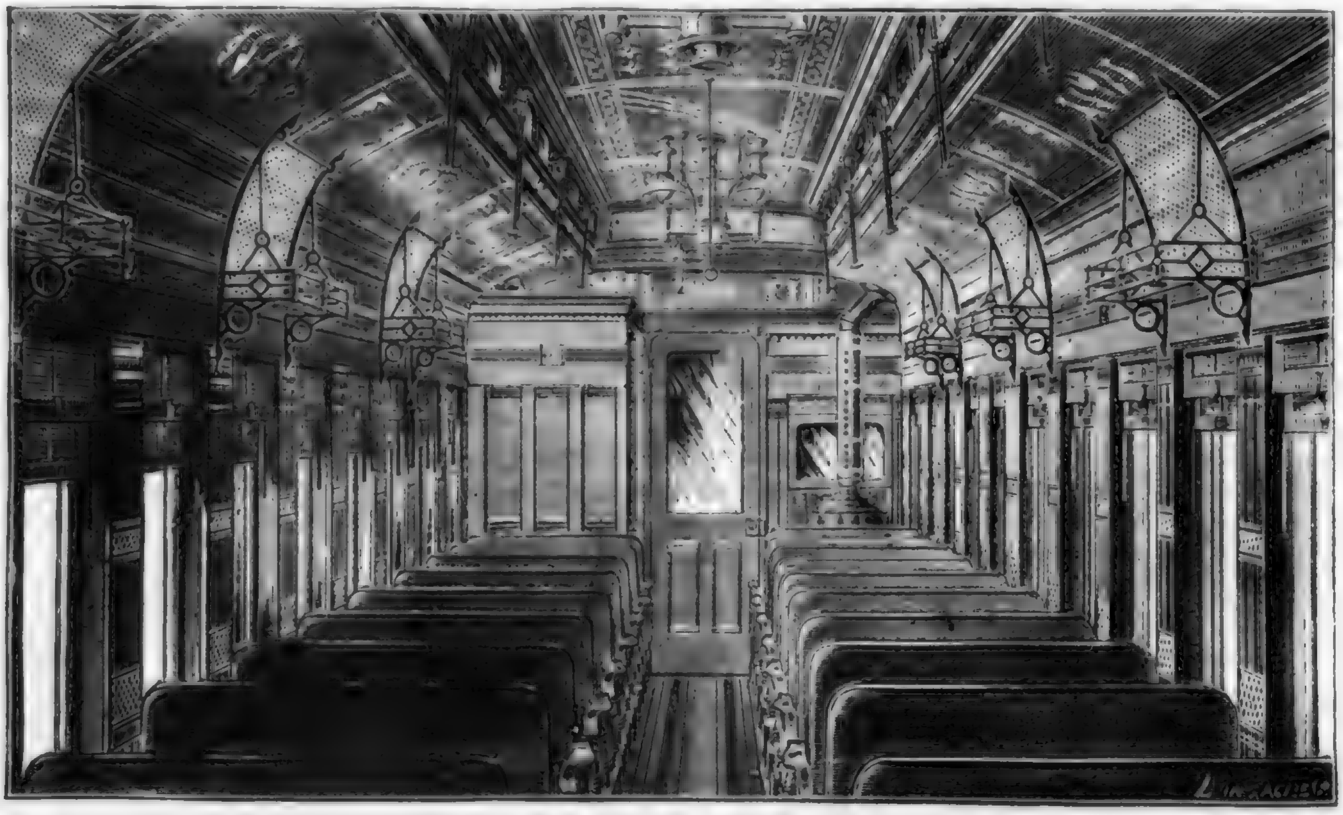


FIG. 17.—VIEW OF INTERIOR.

"Oh, my!" said John. "That must be tremendously steep."

"Yes," replied Lawrence; "so steep that it is somewhat difficult even to walk on it. A great many careful experiments have been made to determine this force of adhesion between the driving-wheels and the track, and naturally there are many circumstances tending to modify this quantity. Icy or rainy weather very largely diminishes this adhesion, while dry weather correspondingly increases it. The most thorough investigations show that on a level track in good condition, and in ordinary weather, the tractive power of a locomotive is about one-seventh of its weight."

"What is tractive power?" asked John.

"Traction," answered Lawrence, "comes from a Latin word meaning to haul or to draw. The tractive power of a locomotive is, therefore, its capacity for pulling. If the weight of the driving-wheels of a locomotive were seventy thousand pounds, it would be capable of exercising a tractive force of about ten thousand pounds. Consequently it is very important, in designing a locomotive, to concentrate the weight on the driving-wheels. This has been exceedingly well carried out in the consolidation engine of the Philadelphia and Reading Railroad, where not only most of the locomotive's weight, but also that of the tender, with its coal and water supplies, is concentrated on the drivers.

"Opposed to the tractive force of the locomotive is the resistance of the train, composed of several different items. There is the friction of each car-axle in its bearings. Then there is the friction between each car-wheel and the track, similar but opposed to the adhesion of the engine-drivers of the track, and in a swiftly moving train the resistance of the air offers no small obstacle."

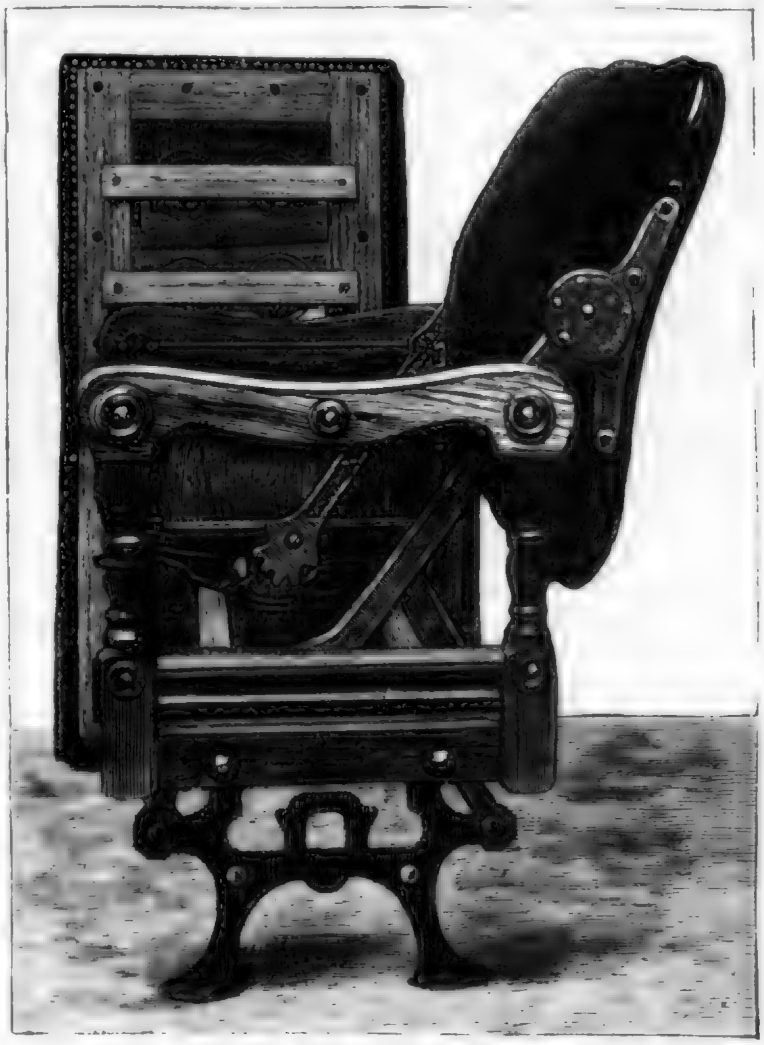


FIG. 19.—HALE & KILBURN CAR-SEAT.

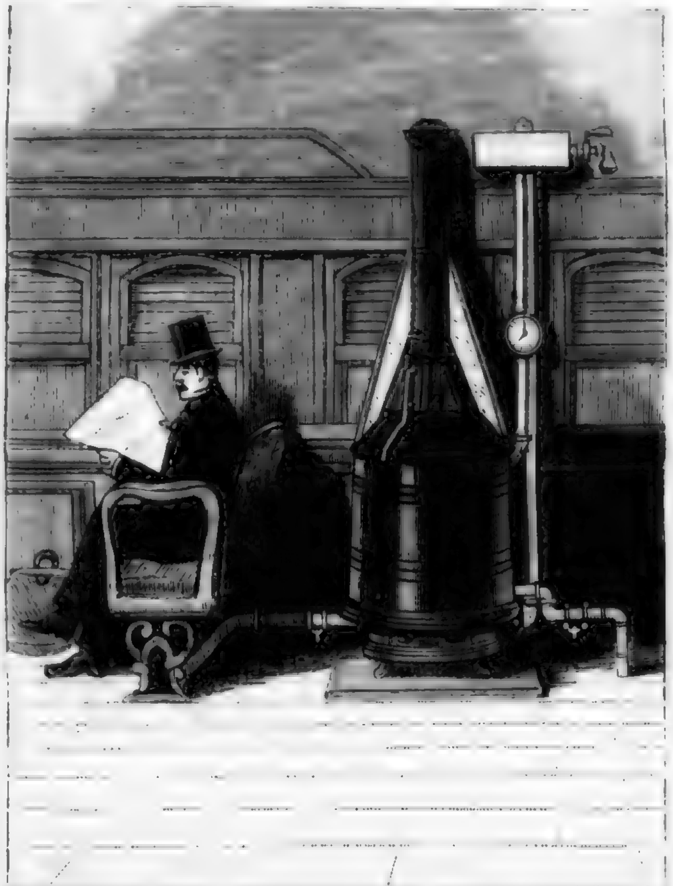


FIG. 20.—HOT-WATER CAR-STOVE.

"The resistance of the air!" exclaimed John.

"Yes," repeated Lawrence; "although the air seems ordinarily so light and tenuous a medium, yet, to a train moving sixty miles an hour, it offers a very sensible barrier. Summing up the various resistances, experiments have shown that every ton's weight in the train on a level track offers about seven or eight pounds' resistance to motion. Now we have supposed a locomotive capable of exercising a tractive force of 10,000 pounds, and if every ton's weight in the train offers a resistance of seven pounds, such an engine would haul about fourteen hundred tons."

"Whew!" exclaimed John. "What an enormous load!"

"Yes," returned Lawrence; "but when you reflect upon the millions of tons of merchandise, and the thousands of tons of passengers that are daily being transported in this country alone, you will see that a great many engines must be constantly employed.

"Next to the locomotive in importance comes the passenger-car (Fig. 16). Here is one built by Jackson Sharp & Company, of Wilmington, and here is a picture of the interior (Fig. 17). Such a car as this, when fitted up in the ordinary manner, without any special attempt at elegance, costs from four to five thousand dollars. In a passenger-car particular attention must be directed to the running-gear, in order that the coach may ride smoothly and easily, and run with slight resistance. The car is generally mounted upon two trucks, one at each end."

"Yes," returned John, "I have often noticed the trucks, and, at the next station, I mean to get out and examine the one under our car very carefully."

"That will be an exceedingly good idea," returned Lawrence, "and will impress upon your mind more firmly the distinctive features. Meanwhile, examine this picture of a truck (Fig. 18), made by J. G. Brill & Company. The framework of the truck consists of four heavy wooden beams, securely bolted together, carrying in the centre a cast-iron plate, in which rests a socket, attached to the body of the car. The wheels are usually made of cast-iron, attached to wrought-iron or steel axles. Each truck carries four wheels, set in a sort of wrought-iron framework, which supports the wooden timbers by means of five very powerful springs. Four or these, two on each side, are spiral springs of heavy steel rod, while the fifth one, set in the centre under the spindle, is made up of plates of steel, resembling a carriage-spring, but very much heavier and stiffer. These springs really support the entire weight of the car, and serve to neutralize the severe bumping and jarring that would be otherwise experienced."

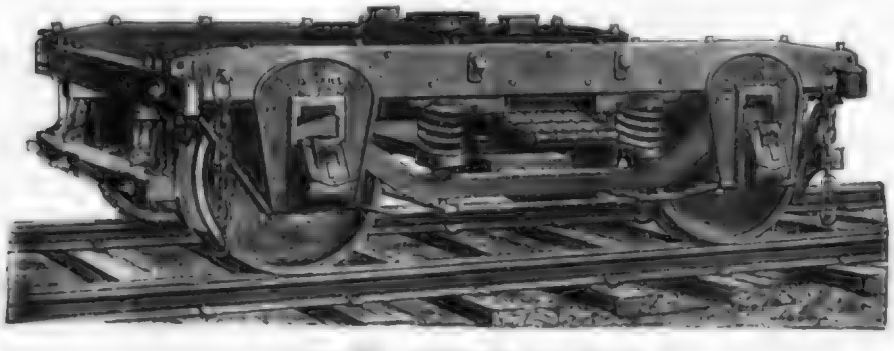


FIG. 18.—PASSENGER-CAR TRUCK.

"Yes," said John, "I suppose if they did not have all those springs, riding in the cars would be very much like jolting over a stony road in a country wagon."

"Indeed it would," rejoined Lawrence; "only the jolts would be as much worse, as the speed is swifter; and, were there no spring at all, in spite of the smoothness of the track, a day's ride would almost shake us to atoms.

"The comfort of a railway journey largely depends upon the care with which the car-seats are constructed. The Hale & Kilburn Company, of Philadelphia, have recently introduced a car-seat with an adjustable back. Here (Fig. 19) you may see its construction. The rods supporting the back of the seat are geared into an iron framework, supporting the cushion, so that whenever the seat is reversed the cushion moves slightly to and fro, adjusting itself to its new position. The cushion, also, has within it a series of springs so planned as to give a very soft and yielding support. Such seats cost about thirty-five dollars apiece."

Here John jounced up and down a little to ascertain the effect of the springs in the cushion, and found them very satisfactory.

"Much time and thought," continued Lawrence, "have been expended by inventors in devising methods by which cars should be heated during the Winter season."

"Why," said John, "I should think that would be simple enough. They always have a great stove in each end of the car."

"Very true," returned Lawrence; "that was the method exclusively adopted until recently. But to it there are many grave and serious objections. An ordinary car contains about thirty seats, so there would be sixty people when the car is filled. In the summertime, ventilation is easily accomplished, as many of the windows are open, and little or no notice is taken of draughts of air. But in Winter the case is different. No one wishes the window open, and it is uncomfortable in the extreme to take even a short ride in a crowded car, full of stuffy air, with a semi-redhot stove at either end. Ventilation is, of course, assisted at every station by the open doors for the entrance and exit of passengers. But here again is another difficulty. Every opening of the door lets in a great wave of cold air, violently chilling the inmates. This wave of cold settles to the floor, and causes almost every one in the car to complain of cold feet. To counteract the frequent opening and closing of the doors, the stoves must be driven to their fullest capacity, and so, whenever there happens to be an unusually long interval between stations, the car is apt to become very hot and uncomfortable."

"But," said John, "the newsboys and fruit-venders keep coming along and let in cold air every time."

"Oh!" said Lawrence, "I forgot about the newsboys. They are certainly a great factor in ventilation. But even with their assistance ill-ventilation is very common. To obviate this a hot-water apparatus has been contrived. Here is a picture of it (Fig. 20). There is a sort of stove or furnace for burning coal, which is entirely surrounded by a double iron casing made in a manner similar to that part of the locomotive boiler which surrounds the fire-box. On the car-roof there is a little tank full of water. From this tank is a pipe to the casing surrounding the stove. Another pipe from the water-jacket around the stove is carried along near the floor of the car, and circulates backward and forward under the seats. Immediately on building a fire in the stove the water is warmed and commences to circulate through the pipes. By regulating the fire the temperature of the water can be maintained at any degree, and by means of a regulating valve near the heater the rapidity of the circulation can be controlled to a nicety, and with it the temperature of the car. In this hot-water system the entire apparatus is provided with a safety-valve in order to prevent the possibility of accidents from too high a steam-pressure. As the pipe system runs out of the heater through the car and back to it again, it may be hermetically sealed, so there is no loss of water by evaporation. The water is generally saturated with salt to prevent its freezing."

"Why!" exclaimed John, "it seems to me it is a funny kind of a heating system that would freeze up."

"It would not freeze," answered Lawrence, "as long as there was any fire in the furnace. But suppose they left a car over-night away up in Vermont, with the thermometer twenty-five degrees below zero, do you not think it would be apt to freeze before morning?"

"Yes," replied John; "I did not think of that."

"Over the old-fashioned stove," continued Lawrence, "this has many advantages. It distributes the heat uniformly throughout the car, locating the supply on the floor, so that the feet of the occupants may be kept warm and their heads comparatively cool. There is, however, a vital objection to all heating contrivances which involve carrying in the car *fire* in any form. So long as the train runs smoothly everything works to a charm. But in case of accident the stoves or heaters are almost certain to be overturned and broken open and to have their contents scattered about among the inflammable materials of the car, when a disastrous fire inevitably results, usually productive of more suffering and death among the passengers than is caused by the accident itself. You remember reading, last Winter, about the dreadful disaster on the Vermont Central at White River Junction, where so many people were burned? These casualties have brought the matter so forcibly to notice that it must be only a question of time before some safer and better method shall displace the stoves. Apparently a scheme for utilizing the steam from the locomotive would be the most completely successful device. One or two systems have been already thought of for its accomplishment. The Martin Anti-fire Car-heater illustrates the general principles of these plans. From the steam-dome of the locomotive a pipe is carried along underneath the cars of the train (shown at S, Fig. 21). In the centre of the car at O a connection is made from this steam-pipe to a series of radiating pipes similar to those employed in the hot-water system, so that the steam shall flow from the locomotive through the cars, supplying them with heat. The condensed water that gradually accumulates in the heating-pipes is allowed to collect in the iron receptacle P, Fig. 22, from whence it may at any time be drawn off. The cost of this heating apparatus is about $250.00 per car, and it is obvious that there can be absolutely no danger, under any circumstances, of setting the car on fire. In event of accident the only danger that could arise would be the possible scalding of some of the passengers by steam escaping through broken pipes. After the cars become once warmed the quantity of steam used to maintain a comfortable temperature is so small, and the pressure so light, that the danger would be infinitely less than are the present risks from fire. The railway companies now fancifully urge against steam-heating from the locomotive the objection that such a demand for steam could not be met by the engine. Practical experience, however, of the roads which now use this device has demonstrated that this argument in fallacious, and heating by steam from the locomotive is better, safer and cheaper than any other system."

"Well," said John, in a tone of satisfaction, "I'm glad we took our expedition in the summer-time, so that if we do roll off an embankment we shall not be roasted, at any rate."

"Yes," said Lawrence, "that is a great consolation, I'm sure. Now," he continued, "the only link in our train which we have not considered is the luggage-car, and I presume you and I are not so much interested in that, perhaps, as those ladies a few seats in advance of us."

John looked in the direction indicated by Lawrence, and saw a party of three ladies and a gentleman, very elegantly attired.

"For," said Lawrence, "I suspect they are going to some fashionable watering-place, and I shouldn't wonder if each of them had, at least, four trunks in the luggage-car filled with beautiful dresses."

"Oh, my!" said John; "wouldn't there be a time if they got smashed!"

"You and I," continued Lawrence, "shouldn't care much if they did get smashed, for we have not even our dress-coats."

"No," said John, "I didn't think mine would be of any use in a machine-shop."

"And you were very right," rejoined Lawrence. "But, to return to the luggage-car (Fig. 23). It presents few features of interest, for it is built very similarly to a passenger-car, except that it is stronger and heavier, with no attempt at decoration. Such a car as we have on our train costs from two thousand eight hundred dollars to three thousand three hundred dollars. Now, I think, we are going round a curve. Look out of the window and tell me how many cars are on our train?"

John turned his head quickly, and, glancing forward as the train rounded a sharp bend in the track, said:

"Well, there's the engine; it's a passenger express engine, for it has two large driving-wheels."

"Good," returned Lawrence; "I am glad to see you remember so well."

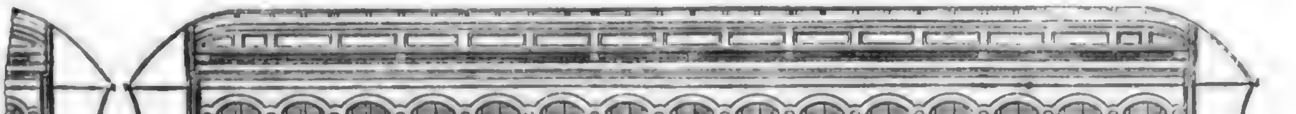
"Then," continued John, "there is a luggage-car. Next comes a car which looks like a luggage-car, but has 'U. S. Mail' on it."

"Ah," replied Lawrence, "I did not know that we had a postal-car in our train."

"What is a postal-car?" was the next question put by tireless John.

"A postal-car," answered Lawrence, "is a sort of traveling post-office. As the mail-train passes through the country, it gathers up all the mail-bags from the little towns along the road, and the postmaster in the car opens the bags and sorts the letters as he rides, thus saving a very great deal of time. For example, on this train going West, the postmaster will pick out all the letters for St. Louis, and so; when Chicago is reached, the mail is all sorted, and ready to be delivered to the various outward bound trains."

"That is an excellent idea," said John. "Then," he continued, "after the postal-car comes a smoking-car, and then five ordinary passenger-cars."



MARTIN'S ANTI-FIRE CAR HEATER.

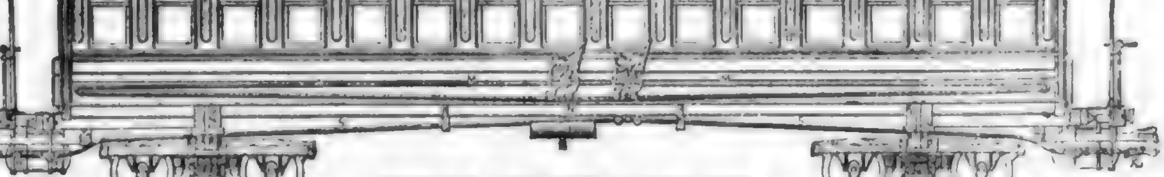


Figure 2.

FIG. 21.—STEAM-HEATING SYSTEM.

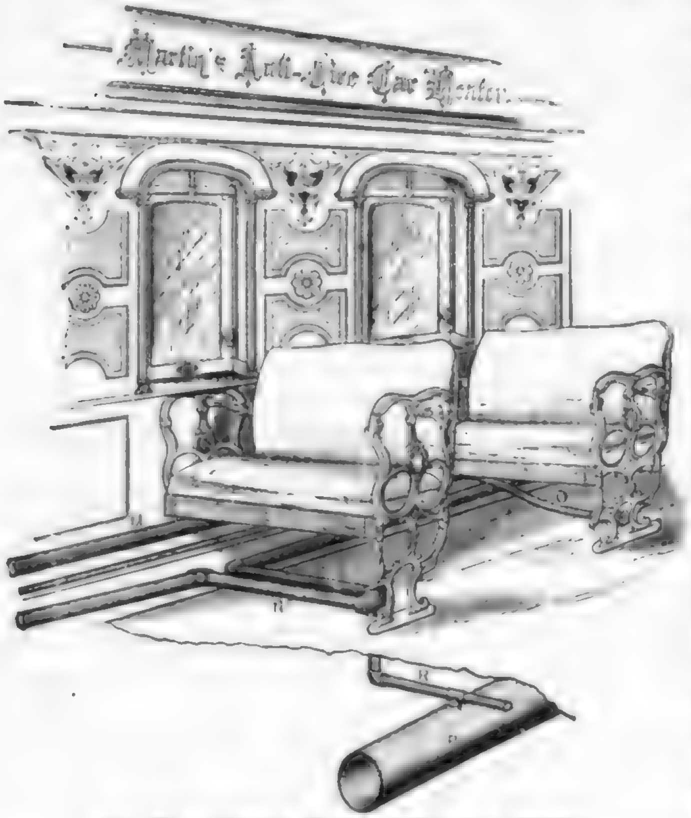

Martin's Anti-Fire Car Heater.

FIG. 22.—DETAILS OF STEAM-HEATING SYSTEM.

"That is quite a long train," said Lawrence. "Now, take this bit of paper and your pencil, and write as I dictate:

Engine	$10,000
Luggage-car.	3,000
Postal-car	4,000
Smoking-car.	4,500
Five passenger-cars at $5,000 each.	25,000
	$46,500

"Now," said Lawrence, "add that up."

John did so, and in a moment said:

"Forty-six thousand, five hundred dollars."

"Yes," returned Lawrence, "I suppose a reasonable estimate for such a train as this would be about fifty thousand dollars. And now," he continued, "if you will write again:

Weight of locomotive	lbs. 75,000
Weight of luggage-car.	30,000
Weight of postal-car	30,000
Weight of six passenger-cars, including smoker	234,000

"What is the total?" asked Lawrence.

"Five hundred and thirty-nine thousand pounds," answered John.

"Or about two hundred and seventy tons," remarked Lawrence.

"What a tremendous weight," exclaimed John, "just to carry a few people!"

"I suppose," continued Lawrence, "if the seats are all full, each car would be capable of accommodating about sixty people, making a total for the train of three hundred and sixty passengers. Doubtless this is very rarely the case, and I should suppose that about two hundred and fifty persons would be as many as a six-car train would, on the average, carry; so you see that, for every passenger a railway company carries, it has to haul fully a ton of dead weight."

"Well," interjected John, in a tone of surprise, "I never thought that in carrying me the poor old locomotive had to be burdened with a whole ton of car-fittings."

"Supposing the train to be full," resumed Lawrence, "counting passengers, luggage and mail, the whole would probably amount to about three hundred and twenty-five tons, and I presume that it costs the company somewhere from one dollar to one dollar and a half per mile just to run the train. Running expenses vary, however, so greatly in different localities, that it is almost impossible to give an exact statement of the cost of operating."

As Lawrence uttered these words, the train gradually slackened its speed, and entered a large level space covered with tracks in all directions, on which locomotives and cars of every variety were standing. On either side of the tracks stretched long lines of brick buildings, with tall chimneys pouring forth black smoke, and through the windows of which the gleaming fires of forges and furnaces could be distinctly seen.

Presently the train came to a standstill at the station, and the brakeman at the door announced, "*Altoona.*"

Gathering up their hand-luggage, the young gentlemen rose from their seats and left the car.

AN AUSTRO-IRISH VISCOUNT.—Among the Irish viscounts figures the name of Edward Francis Joseph Taaffe, Viscount Taaffe, who was born in 1833 and succeeded to the title in 1873. It is not, I imagine, generally known that this Irish Peer is the same person who, as Count Edward Taaffe, holds the office of President of the Austrian Ministry. This nobleman's ancestors for several generations have served the Austrian monarchy, and have practically deserted their own country. Count Edward himself was born at Prague, has been the lifelong confidant of the Emperor Francis Joseph, and has filled a succession of high offices for nearly five-and-twenty years. The Irish Viscounty dates from 1628.

TELL-TALES are contemptible beings. To retail in one house what is seen or spoken of in another is a treason against society which cannot be too thoroughly despised.

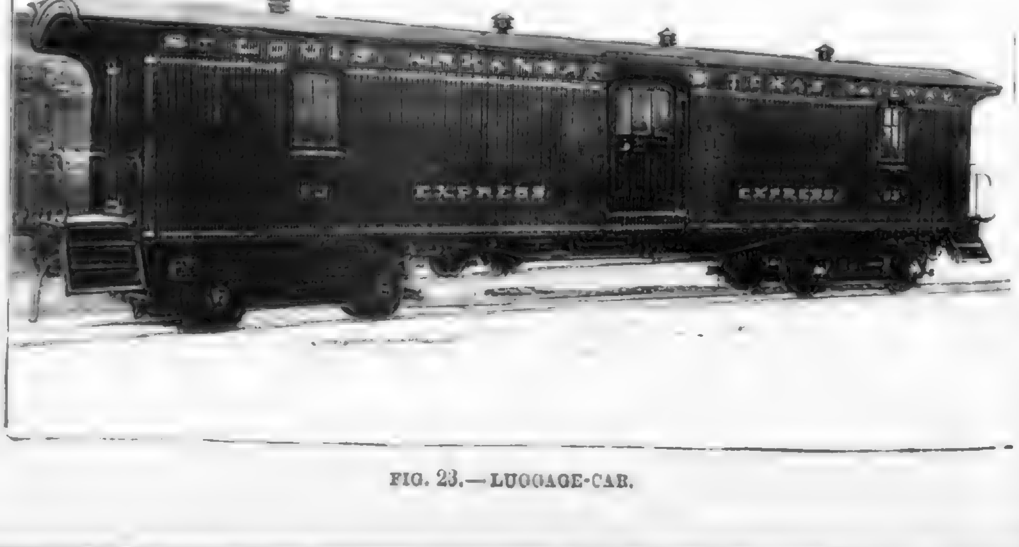
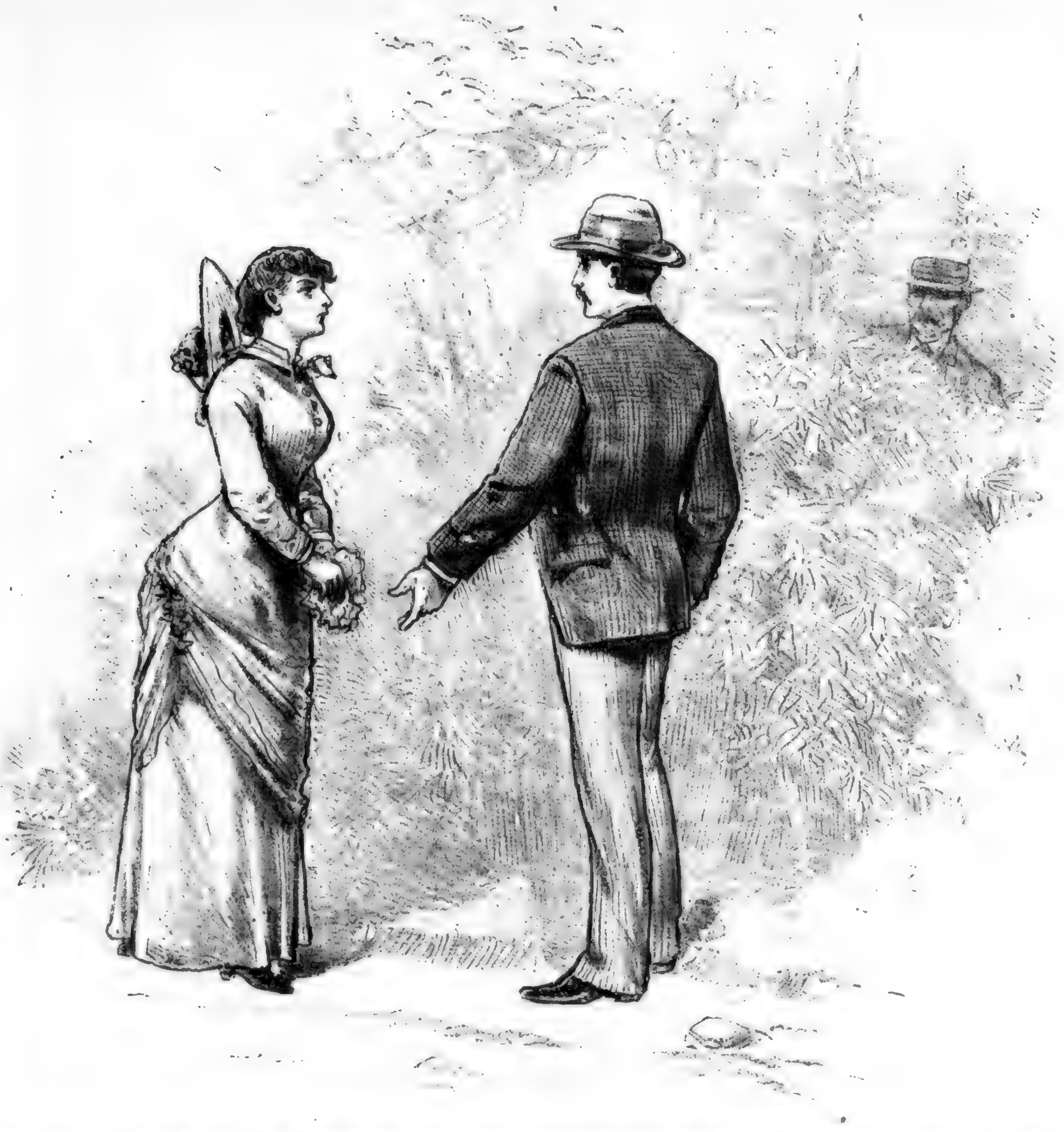


FIG. 23.—LUGGAGE-CAR.



"INSTINCTIVELY REUB MOVED BACK AND DREW HIMSELF UP QUICKLY IN THE DENSE SHADOW OF A CLUMP OF BUSHES. 'I WON'T GO ANY FURTHER WITH YOU NOW,' GIL WAS SAYING, IN A SORT OF PLEADING TONE. 'THERE'S ALWAYS PEOPLE ROUND THE STATION, AND IT'S BEST WE SHOULDN'T. IT'S ONLY FOR YOUR SAKE, KITTY.' SHE WAS WEEPING NOW."

GABE'S KITTY.

BY MADELINE S. BRIDGES.

"HELLO! It's Gabe's Kitty, ain't it? 'Evenin', Kitty."

Gabe's Kitty and Gabe's Corner were well-known features in the mining districts of Sheldon. They belonged to each other, in the fact that they both belonged to Gabe. Kitty was his daughter, and the "Corner" was his shanty, which had by degrees assumed quite imposing proportions as the leading store in town. Kitty had done much to increase the popularity of Gabe and his Corner. She was a willful, gay-spirited girl, and very pleasant to look at, even in the gathering dark of the Summer evening, as she responded with equal informality to this informal greeting.

"Reub Murray, get along. You scared me; for a fact, you did."

But she stood still in the road, and for a second Reub held in his the little, hard hand of the woman he loved.

"Scared you, did I, Kitty? That ain't easy to do."

"Well, it ain't easy"—in the soft, clear starlight he could see her teeth flash in a smile and the dimple deepen in her brown cheek—"but you hit it out this once in your livin' life."

"You're a-goin'——" he began, hesitatingly.

"I'm goin' up Kelter's way," she interrupted, in a clear, decided voice; "and I'm goin' along as fast as I know how. Ain't that the same as Good-evenin', Reub?"

"Sha'n't I—can't I, walk with you a little ways?"

"You can't, Reub; not any ways at all."

"Well, let me walk along when you're comin' back?"

XUM

"No—because—I'm going to meet another fellow." She was still smiling, saucily. "You haven't any objection to that, I hope?"

"No, I haven't: if you'll only tell me who the fellow is and where to find him, so I can go ahead and shoot him."

"Much shootin' you'd do!" She laughed, lightly. "Well, I don't see as I can stand here all night. No, Reub, I can't. Honest, I have promised to meet somebody. Pshaw!" She pulled away from him the hand he had again captured. "Ain't you ever goin' to get sense? There's lots of girls in the world—lot's of 'em——"

"There's only one Kitty," he said, forlornly, and his face was sad enough to see, as he bent his tall head over the careless, half-defiant face before him. "Only one Kitty, *anywhere*."

"And—you—can't—have—her!" She prolonged her words with playful intonation. "For pity's sake, get it through your head. There ain't no one I like better for a friend, but—likin' ain't lovin', Reub, and it never will be. You'd just as well look out for some one else. You'll be gettin' left, furst you know," she added, with her pretty, ringing laugh.

"I am left," he said, in a low voice. "No one else will ever tell me that but Kitty."

"Well, you are left, sure enough, in the middle of the road. Good-night, Reub. I can't stay any longer."

"Go ahead. Who's stoppin' you — who's stoppin' you?"

He drew a long, deep breath, and, as she moved swiftly away among the darkening shadows of the tall pines, he pulled his hat off, and stood looking after her, letting the wind cool his fevered face and brow. It was such a long time that he had loved Kitty; ever since the day he helped her father to unload the wagons when they first came to Sheldon, and Kitty had worked with him, a tall girl of fifteen, with dark hair streaming loose to her waist. She was twenty now, and he was twenty-six, but it seemed to Reub that he had loved Kitty all his life.

* * *

The bell from Kelter's Mill was slowly ringing ten, and Reub was striding along the road over the hill to his cabin. The road by which Kitty must return crossed this at the railroad-track, a little way behind him; but he had turned his back on temptation, and had resolutely put away the half-formed plan of meeting her face to face with her escort, whoever he might be, or, at least, of assuring himself that her words were the mere overflow of mischievous gayety of heart. He had conquered this impulse with a smile of self-contempt, and was sending the ground behind him in fine, swinging style, his head up and a cigar between his teeth, when his heart stood suddenly still. The sound of the bell had ceased, but another sound close at hand had taken its place—the sound of voices; of Kitty's voice, and the voice of his partner, Gilbert Wray. Instantly he knew they were coming through Lent's pasture-field by the cross-cut, and must step out on the road before him in a moment more. Instinctively, he moved back, and drew himself up quickly in the dense shadow of a clump of bushes, and stood still to let them pass.

But, instead of passing, they, too, stood still, within three yards of him. He could see their faces plainly by the late-risen moon. This, then, was his rival, Gilbert Wray! the man with whom he had slept and worked and broken bread; who had shared, at his side hardship and success; the man, of all others, whom he trusted and believed!

"I won't go any further with you now," Gil was saying, in a sort of pleading tone. "There's always people round the station, and it's best we shouldn't. It's only for your sake, Kitty."

"Oh, no!" she said, piteously, and tears were in her voice. "No, no, no! It's because you don't care to be with me—it's because you don't care! I come all this way, and would, if it was ten times further, to see you; but it's always the same. You don't care how soon we part—the quicker the better always for you. Well, it's so, it's so!"

She was weeping now, passionately, and could say no more.

"Kitty," said Gilbert, gently and tremulously, standing apart from her with his arms folded, as if against temptation, "it cuts to my heart to see you like this. God knows if ever I meant to give you any trouble. Did I, Kitty? Wasn't I fair and honest to you? I told you I was married."

"Oh, not in time; you didn't," she stammered, through her sobs. "It was a week before—you—told me. And—and the very first day when you came in with father I thought you were the one I could love. Oh, I don't ask you to love me, Gilbert—I could never be wicked enough for that—only I must see you *sometimes*. I want you only for my friend. Now, is that any harm? I have no brother—no one but father. Why won't you let me be something to you? Why can't we be *friends?*"

"We can't, Kitty." He fixed his face sternly, and looked down at the beseeching, upturned face, wet with tears, in the moonlight. "No good ever come of that kind of friendship. If I was your friend, as you'd like me to be, Kitty, I couldn't be a true husband. My thoughts would go to you more'n to the woman they belong to, because I am very lonely here, and you are near me, and it wouldn't do! I know the world, my girl, and I know how quick an innocent feelin' can change to somethin' different and bring no end of trouble. I tell you, Kitty child, what's for your good is never to see me any more."

"But I can't," she said, huskily. "That's foolish talk. Do you want me to *die?* Ain't it bad enough to be week after week waitin' for a minute or two like this? I won't tease you, Gilbert; but oh, promise to come down—*sometimes*, any way! Come with Reub. I don't mind anything, if I can see you once in a while, and know you're well and not forgettin' me."

"But, my girl, it ain't *right* you should think of me like that. Can't you see it ain't fair—to Alice? Think, if you was my wife, Kitty—my wife that I chose and married."

"Oh, don't."

She hid her face on her arm with a sob.

"Yes, I must, Kitty, else you won't understand; and if you was far away, and could see me standing here with a pretty girl; if you was my wife, Kitty, that loved me, *would you think it right?* What would you wish me to say to that woman—for your sake? Tell me now; be honest, Kitty."

"Just what you have said, Gilbert." She looked up at him with sudden courage. "Yes, if it broke her heart! You are the best man that stands in God's world to-night. And, Alice," she said, brokenly, after a minute's pause, is—the happiest woman. Well, now, I'll leave you. It always ends the same, doesn't it? I cry myself sick, and—you are sorry—and—it's my fault, Gil, all of it! Oh, but if any one could ever *show* me how to put you out of my mind, it's all I'd ask. I guess that's past prayin' for, though. Well, all right, we'll live till we die, I suppose. Good-night, Gill. I'm sorry——"

She broke off suddenly, and held out both her hands. Gil took only one of them, pressed it, and dropped it gently.

"Good-night, Kitty. I'd best not come any further."

"Oh, that's all right. I can get along. I've got to, anyway." Her laugh jarred strangely on the sobbing pathos of her voice. "Good-night, Gil. I ain't askin' you to come and see me any more."

But to this he made no reply. He only said, "Take care of yourself, old girl!" and so they parted; Kitty hurrying down toward the town, Gilbert slowly mounting the hill ridge, his head bent thoughtfully on his breast. And the listener in the bushes flung himself face downward among the brushwood, and buried his head in his arms.

* * * * * *

It was long past midnight when Reub reached his cabin, but the lamp was still burning, and Gilbert had not yet retired. He was writing, seated at a corner of the rough table, on which were placed the dishes ready for breakfast. The floor was swept and clean, the lamp-chimney shone like crystal, and the little place altogether showed a home-like orderly keeping—very rare to find in the miners' cabins at Sheldon.

Reub came in with a loud, unsteady footstep, and flung himself down on the nearest bench, that creaked beneath his weight.

Gilbert looked up steadily at his haggard, gloomy face and wild, disordered hair, to which some dry leaves of the underbrush were clinging.

"*Hello!*" he said, in a tone of perfect comprehension.

"No, I ain't," Reub answered, hoarsely; "not a drop, but I've got a blamed, confounded headache, and I'm goin' to bed."

"Well, take some, then." Gilbert nodded toward a closet in the corner. "The bottle's there, and I'll git you up some hot water, if you say so."

"Never mind. Go on with your writin'. Sleep's the thing for me, if I can only git it."

"I'm through, now," Gilbert said, in a tone of satisfaction, opening and shutting his cramped hand, as he glanced at the finished page. He folded it up awkwardly, and began to shove it into a yellow envelope.

"I've been writin' to my wife," he said, slowly, with a grave smile. "I've been tellin' her I'm goin' home, Reub; "I'm goin' home, sure, the last week of this month."

"You ain't?"

"Yes, sir; for a fact, I am."

Reub was silent for a moment, gazing at his partner with a bewildered air.

"You're goin' to leave a fortune here, behind you, in Sheldon Mine? You won't wait to dig it out?"

"Sho!" said Gilbert. He was still looking smilingly at the letter.

"Well, I suppose you can't *help* bein' good. Ain't that the moral of it? Now can you, Gil?"—in the tone of a man pleading for a fair, unbiased answer.

"Good? Who's talkin' about bein' good? What's that got to do with goin' home to stay with your wife and child, I'd like to know?"

"Well, I ain't givin' myself away, old man"—Reub began to pull off his boots, with a brightened aspect—"but I happen to *know* you can't help bein' good, and that's enough for me."

"What on earth are you gabbin' about? and where you been to-night, anyhow?"

"I've been to church," said Reub, promptly.

"Yes, you have!" in a tone of derisive unbelief.

"That's where I've been. I've been hearin' holy gospel."

"You look like it."

"I feel like it, any way." He threw his heavy boots behind the stove and went over to the settle-bed in the corner and sat down on the side a moment or two, facing his comrade. "Don't leave the light burnin' for me, Gil. I sha'n't want it. I'm bound to get my whack of sleep to-night, my boy." He laid his head down on the pillow. "Ain't I been to church?" he murmured, and turning his face to the wall. "Never mind if I ain't, that's all."

* * * * * *

"He's gone, Kitty; it's the truth. Went yesterday in evenin' train, Gil did."

She pushed by him and entered the little cabin, looking round in a dazed sort of way.

"Sure enough," she said, standing still in the middle of the floor. "I didn't believe it. I *couldn't* believe it, that he'd go like that, without even sayin' good-by." She seemed as if speaking to herself. "Gil didn't used to be so independent."

Reub walked over to the little window and looked out, miserably silent. Her face frightened him, it was so unlike Kitty's—so strange and changed.

"You'd think he'd say good-by to father," she continued, in the same hard, heartbroken voice. "We were friends to him, all of us down there."

"He was called off sudden," said Reub, bravely, beginning, through sheer despair, to invent. "Hem! called off sudden. His child—yes, his little boy—was terrible sick——"

"He had no little boy. It was a girl," she said, eagerly.

"I said girl, didn't I? Well, you see she had—oh, smallpox—most dreadful bad!" Reub flourished his hands in a manner vaguely descriptive of intense suffering. "And—she kep' callin' for father. He had to go, Kitty. What else could he do?"

"Yes, but the people here might call for him till they was hoarse, I guess, and he wouldn't come back."

"Oh, he's comin'," said Reub, briskly, casting truth to the winds. "It's a secret, Kitty; no one knows it but me. Yes. Oh, he's comin' back. Of course he's comin' back."

"*When?*" she queried, sharply. She had crossed the room now, and stood at his side. He was forced to look round and meet the anguish of her dark, tearless eyes. "You ain't foolin' me; you ain't, Reub Murray, are you?"

"Foolin' you? What for? It won't make much differ to *you*, will it, whether he comes or stays? Well, he is a-comin' here—let me see—about the 10th of October; but don't you give it away—it's between ourselves. The 10th of October will fetch *him* back."

"Oh, Reub, I hope it will. And now her fixed, dry eyes softened into tears that did not fall. "I'm so sorry his child is sick. Poor Gil! we'd miss him awful if he staid away, wouldn't we, Reub? And you—why, you'd be lost without him! Well, it's all right if he ain't gone for good. Don't tell any one I came up all the way to inquire about him, will you, Reub? I didn't, either." She was smiling and beginning to look like Kitty again as she straightened her hat at the little glass. "I was comin' up to Sarah Kelter's, anyway; but, somehow, I always did think a lot of Gil. He was good to me. The 10th of October! Oh, that ain't long to wait."

Poor Reub bit his lip, and looked out hard at Sheldon Mountain.

* * *

"We'll call the baby Kitty. It's our first, and she's *got* to be named for *you*," said Reub, decidedly.

"Oh, I don't know; Kitty ain't a pretty name. Perhaps your wife wouldn't like it."

They were walking together from Reub's modest villa to Gabe's Corner, over the old road, that was now well paved and lighted, and Kitty was leaning on Reub's arm, as they discussed this grave question with earnestness.

"My wife was the first to say so, and if she hadn't been, I'd been. Don't you think, now, you'd ought to have *some* duty to my child for the sufferin's you gave her father more'n once?"

Reub laughed, as if the suffering mentioned had been rather of a pleasant nature.

"All right," said Kitty, gayly. "I'm a godmother. I only hope I can live up to it."

"You ought to have children of your own, though," Reub continued, tenderly. "There's nothin' like it. I tell you a fellow—a person—don't know till they are a father, or a mother—they don't know nothin' about the hold it gives you onto life." Reub had been a parent nearly a week. "That little girl of mine, now, she ain't a great deal to look at, but do you think I'd give her for the hull of Sheldon's Mine? Not much I wouldn't. No, sir, there ain't gold enough in Colorado to buy that bundle of white flannins."

"Oh, you goose!" said Kitty, laughing. They were slacking their pace now before a fine brick building that bore the legend, "Gabe's Corner," in gilt letters along its front. "Come in a minute, can't you; it isn't late."

"I guess I won't—not to-night. I'll go along back to Lucy. The baby might——"

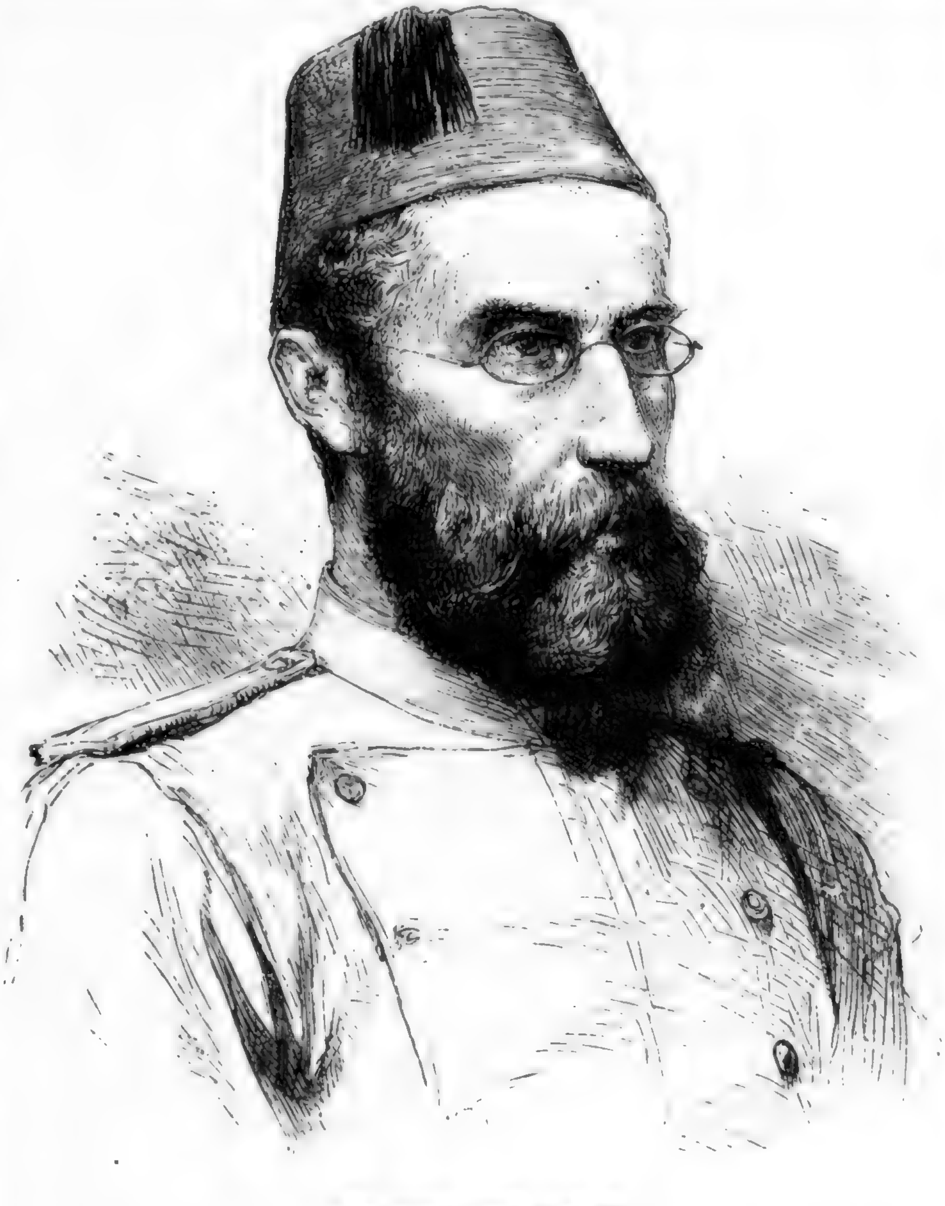
"She might wake and cry for you," said Kitty, gravely, with the old mischievous sparkle in her eye. "Well, go on. Tell Lucy I will be over in the morning."

"Kitty; is that you, Kitty?" Gabe's voice greeted her from the open door as she ran up the steps. "There is some one here bin waitin' to see you—waitin' most sence you went away—there in the parlor."

"Is that so?"

She pushed the door open. The light fell full on her face and dazzled her for a moment, then she found herself face to face with a tall and well-dressed stranger, who stood still beside the table looking at her without a word.

"Did you wish——" she began, pleasantly. Her voice



EMIN PASHA.—SEE PAGE 535.

faltered. She pressed both hands against her head. "My God!" she said. "It's Gil—it's Gilbert Wray!"

She did not move toward him. She stood quite still, looking at him with dilated eyes.

"Kitty. And is *that* your welcome?"

He held out both his arms.

"*Is it?* she answered, breathlessly.

She flung herself on his breast, and for the first time in all their meetings and partings they clasped and held and kissed each other as friends may, perhaps, but as lovers *must.*

"Oh, and you came! It is eight years—do you know it, Gil—eight years since you went away? I am glad, glad, glad to see you. It's like a dream. Let me look at you, Gil."

She had found her voice now, and was trying to withdraw herself gently from his arms, but they tightened their hold.

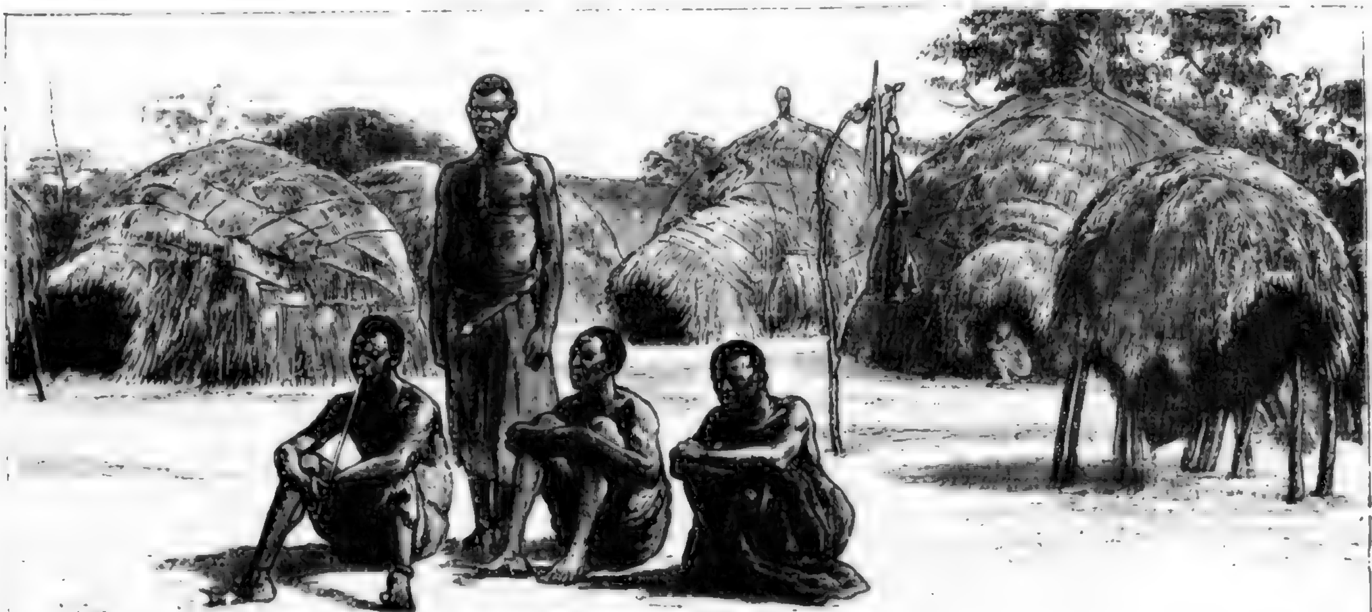
"I've come to stay, Kitty—to stay with you, if you will let me, dear."

"With me, Gilbert?"

"Yes, Kitty, I'm alone now in the world. My girl, my only child, has just been married, and poor Alice died two years ago. I made her very happy, Kitty. I was good to her always, and—now I am alone—and I have come to Kitty, if she can make room for me in her heart."

"You took my heart away with you when you went from Sheldon," she said, gently. "And—you've had it ever since."

"But I left my own heart here," laying his bronzed cheek softly on her dark hair. "Do you think I would have gone if I hadn t loved you, Kitty?"



THE EMIN PASHA RELIEF EXPEDITION.—AN UNYORO VILLAGE.—SEE PAGE 535.

XUM

HIDDEN STARS.

I WATCHED the day sink out of sight,
With snowflakes in her hair,
And sombre garments trailing out,
Upon the frosty air.
A brooding stillness wrapped the earth,
A strange and mystic calm,
As if it heard, from heights above,
The sound of prayer or psalm.

The clouds shook out their leaden folds
Across the frowning sky:
The timid stars, forbid to shine,
No longer cheered the eye.
So dark, so chill, no voice, no sound,
No light athwart the gloom:
It seemed as if our pallid forms
Were ghosts within a tomb.

The night climbed toward the midnight hour
With slow, majestic tread;
I looked again. Lo! clear and bright,
The stars were overhead.
And there, in lines of living light,
More sweet than poet's rhyme,
I read, "Behind the cloudy vail
We're shining all the time."

So, when some cherished hope goes down
In rain of falling tears,
And heavy clouds of grief hang low
Above the coming years,
I'll grope my devious way along,
Secure from every ill;
Content to know, though hid from sight,
God's love shines o'er me still.

A COLONY OF LATTER-DAY SAINTS DOWN ON CAPE COD.

By Mrs. Ellen E. Dickinson.

Down on "the tip of Yankee land," as Cape Cod is sometimes called, there is a colony of Mormons, distinguished from their brethren in the far West by the term "Josephites," or "Latter-Day Saints," as they profess to be the converts of Joseph Smith, Jr., son of the so-called Mormon prophet, and not to believe in or practice polygamy. The colony consists of some two or three hundred members in Dennisport, contiguous to and a part of West Harwich, which is reached by the railway that runs from one end of the Cape to the other, connecting the villages on the route, somewhat after the fashion of a string of beads. Taking an early train at Boston, Harwich is reached by noon. The country bordering this road is very picturesque. Here and there an elegant Summer villa peeps from amid dense foliage, or some antiquated mansion is isolated as though friendless and alone; pretty lakes gleam in the sunshine, crested with water-lilies, and a windmill with its long arms crowns a hill. The foliage is everywhere luxuriant after passing Buzzard's Bay, and the wayside flowers are of unusual beauty and variety. The loungers at the stations are eminently fitting in such a moving picture, and are unique in appearance. They are generally gaunt and thin, as though they had been reared on "blue fish and east wind," and are content to wear the bodily coverings purchased by their ancestors.

At Harwich station a conveyance of an ark-like appearance and capacity is found for the transportation of passengers to the clean, pretty, well-ordered old town of West Harwich, and just beyond is Dennisport, close to the ocean. The dwellings of the "Saints," that stretch along the sides of several streets or roadways, are built of wood, painted white, and are of tolerable size, and, without the slightest pretension to ornament or beauty of architecture, are very thrifty and comfortable in appearance. Flowers are cultivated in some of the small yards bordering on the street; but there is a conspicuous lack of any attempt to adorn these tiny doorways. A fair-sized meeting-house, off from the main thoroughfare, is equally plain, and lacking in all architectural display. It is the only public building in the village, and is used for social purposes as well as the Sunday and weekday gatherings for worship. An admirable drive leads down to the shore, where there is a long dock reaching out into the ocean, some sheds for packing fish and shelters for the fish-dealers. Nearly all the male "Josephites" are fishermen. The Harwich residents refrain from calling the people of this community "Mormons," but while they are nominally friendly, and barter in trade with them, do not consider or treat them as though they are on the same social grade with themselves. Captain Howes is the most prominent of the "Saints," and is said to be ever ready to define his peculiar doctrines. This decidedly amphibious-looking individual, seated in his boat, or giving directions to his subordinates in relation to a "catch of mackerel," would make an interesting study for an artist. He is lank and keen-eyed and brown, and of rather intelligent visage—just what the Yankees call "cute-looking."

"Yes," he was quite willing to talk of his religion. "We are Mormons of the kind called 'Josephites,' the true 'Latter-day Saints.' We do not believe in plurality——"

"You mean polygamy?"

"Yes, that is what I mean. At the time of Joseph Smith's death the Mormons separated; some following Brigham Young. Joseph Smith, Jr., of Plano, Ill., is our leader. His father was a true prophet. The true baptism is immersion, because Christ was baptized in the River Jordan; no one will be eternally lost, and we think Christ is coming to reign over us in person."

"What of your form of worship?"

"Just like that of other people: a Sunday service, Sabbath-school, and weekly prayer meetings. We have the best of all religions mixed up in one. Our Bible is one that Elder Pratt translated. It is like the King James Bible, only it explains things a good deal."

"And the Book of Mormon?"

"Oh, that is the History of Mormon, that Smith discovered on some gold plates. I don't know who wrote it, and I never read it."

Captain Howes has always resided at Dennisport, and was "converted by a Mormon missionary." Two Conference meetings are held by the "Saints" in Ocean Hall, West Harwich, every year, as their own public auditorium is not large enough to accommodate the Mormon colonists who gather there from Fall River, Providence and Boston. The town's people also attend these meetings. They have "smart speakers and first-rate singing," one of the residents of Harwich remarked. Some converts are made in each of these semi-anniversaries through the eloquence of Joseph Smith, Jr., or some preacher selected for his persuasiveness, who joins the community at Dennisport or elsewhere.

There is a resident elder, but he is too much under the weather, usually, to answer the curious questionings of visitors, and hides himself beneath the obscurity of his domiciliary roof. Persons less cautious, who have not quite gone over to the faith, affirm that, while these Mormons profess not to believe in "plurality," they act in numerous cases on the principle of "affinity." Marriages among them have frequently been broken in this way, to be resumed if it is practicable. A young woman did not hesitate to say that "Love goes where it is sent"; and that "people cannot help loving, even if they are married." The children of this colony attend the free school in Harwich with the other children of the vicinity. An intelligent person, born and brought up on the Cape, and accustomed to the tolerance used toward the "Saints," remarked: "These Mormons have got some black sheep among them, but generally they are industrious, and behave well."

Another said, in excuse for one of them who departed with an affinity belonging to the colony:

"Why, he came back, and is living here now." And, in speaking of a woman who left her partner and went to Utah with an "affinity": "She was gone twenty years, but has returned to her family, and they are all very happy together."

In short, while this Cape Cod colony of Mormons profess to be outwardly decent, they are secretly of the same stamp as the Mormons of Utah.

A *détour* can be made on the return from Dennisport to the station through a lovely grove of hemlocks, festooned with the fine pale-green Spanish moss common to this portion of the Cape. A lake, studded with small islands, is near, to make the picture complete, and suggestive of an earthly paradise, until some unfortunate turn in the road brings the roofs of the Mormons' houses into view, and the quotation seems apropos:

> "Where every prophet pleases, and only man is vile."

The Cape Codder is loquacious, and makes the return to the city less tedious than it would otherwise prove. He will inform one that the owners of property on the Cape have but one chance in their lives to sell their real estate; that every other man has been, or is, a sailor, and when they get weary of roaming over "the deep, deep sea," they settle down to cultivate small farms; that nautical expressions are very common; that herrings, salted and dried, are used through the year, and called "Cape Cod turkeys," etc., by the poorer classes; that a peculiarity of the Cape is a community of names, many residents of the same town having the same name, who are not at all related, etc.; and—what is possibly a real regret—that so many New York and Boston people visit this delectable land every Summer, that he is troubled at the prospect of having his beloved institutions, customs and manners become things of the past and mere traditions.

THE EMIN PASHA RELIEF EXPEDITION.

A SKETCH OF EMIN PASHA'S LIFE AND WORK.

By Robert W. Felkin, M.D.

Few of my readers will understand the feelings I experienced when, on October the 28th, 1886, after a silence of nearly three years, I received a letter from Dr. Emin Bey. A friendship conceived in the very heart of Africa is usually no ordinary one, and it was there I first clasped hands with the remarkable man in whose unique position and work it will be my endeavor to interest you.

Until the publication of his recent letters, his name was almost unknown, except to a small group of scientists and friends, who had followed his extraordinary career with deepening interest, and who had almost given up hope of again hearing from him.

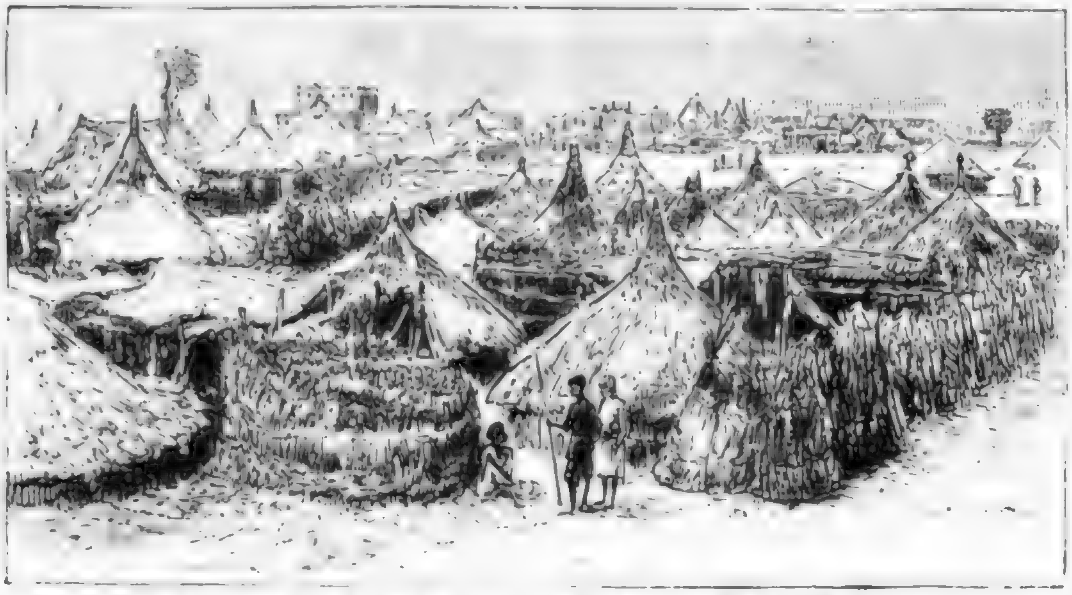
When the northern portion of the Egyptian Soudan was handed over to anarchy, people seemed to imagine that the whole of the possessions of Egypt were lost, and that, except for certain frontier troubles, England would have no more anxiety concerning them. Such, however, was not the case; for the pearl of the Soudan was still intact, held by the energy and resources of one man, himself aided by the heroic devotion of a handful of Egyptian and negro troops.

It would be of interest, but beyond the limits of my space, to enter into the whole subject of the Egyptian annexations toward the equator; suffice it to say that Egypt, owing to the anti-slavery policy of England, had, under the leadership of Sir Samuel Baker and General Gordon, annexed extensive tracts of country, with the view of exterminating the slave-trade.

The popular idea that the whole of the Soudan is composed of barren deserts is totally false, for from Khartoum southward extends a country, once under Egypt's sway, which is perhaps one of the most fertile on the face of the earth. Those who know the country have never doubted its immense value, and those familiar with the inhabitants have ever wished the chains of misery that bound them should be unloosed. But England's anti-slavery policy was not carried through; the interest excited by Gordon Pasha's efforts to subdue the slave-trade and introduce a just government into the Soudan soon flagged; and when, in 1880, finding his plans thwarted and the support he had enjoyed withdrawn, General Gordon resigned his post, the fate of those fertile plains and their teeming populations was sealed. His heroic defense of Khartoum appeared to reawaken popular enthusiasm, and the city's fall was keenly felt by the British public. If this feeling were genuine, I am sure the public will sympathize with a man who has held his province for four years, unaided by supplies, and unsupported by a single word of sympathy from the civilized world. Surrounded by bitter foes, Emin Pasha has known how to infuse his enthusiasm into the hearts of his followers, and up to July of last year, to our knowledge, this brave man has bidden defiance to the raiding slave-dealers and to the disaffected negro tribes that harassed his borders.

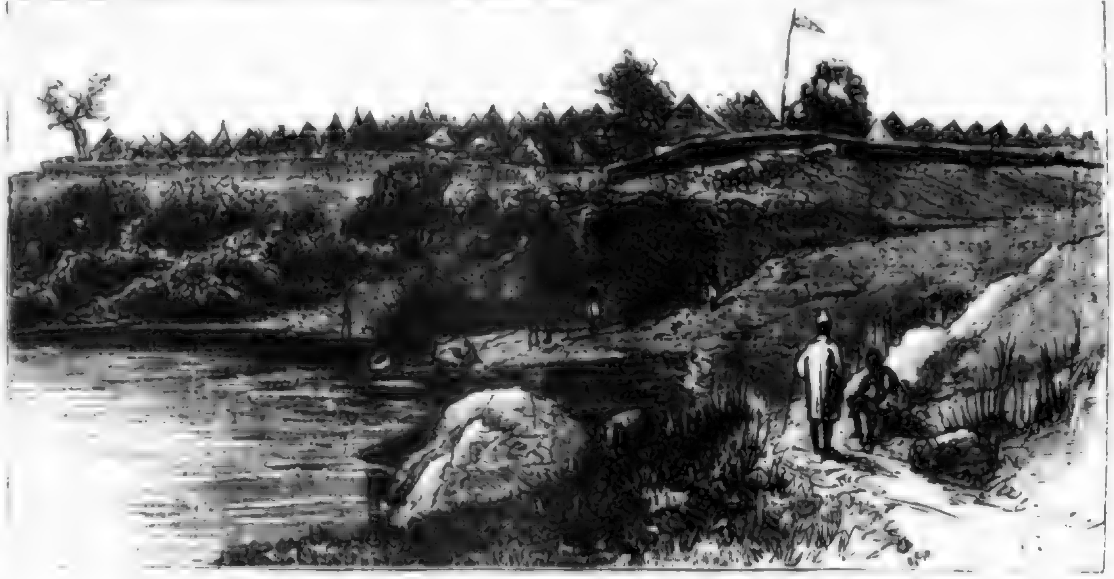
The letters bearing evidence of his existence were forwarded by the missionaries of the Church Missionary Society in Uganda to Zanzibar, and the last letter I received from him reached Edinburgh from Wadelai in the space of four months and a half.

I shall now endeavor to give you a description of Dr. Emin Bey, who, since the arrival of the news that he was still holding out, has been raised by the Egyptian Government to the rank of Pasha. I have been often questioned as to his appearance, his manner of his life, his



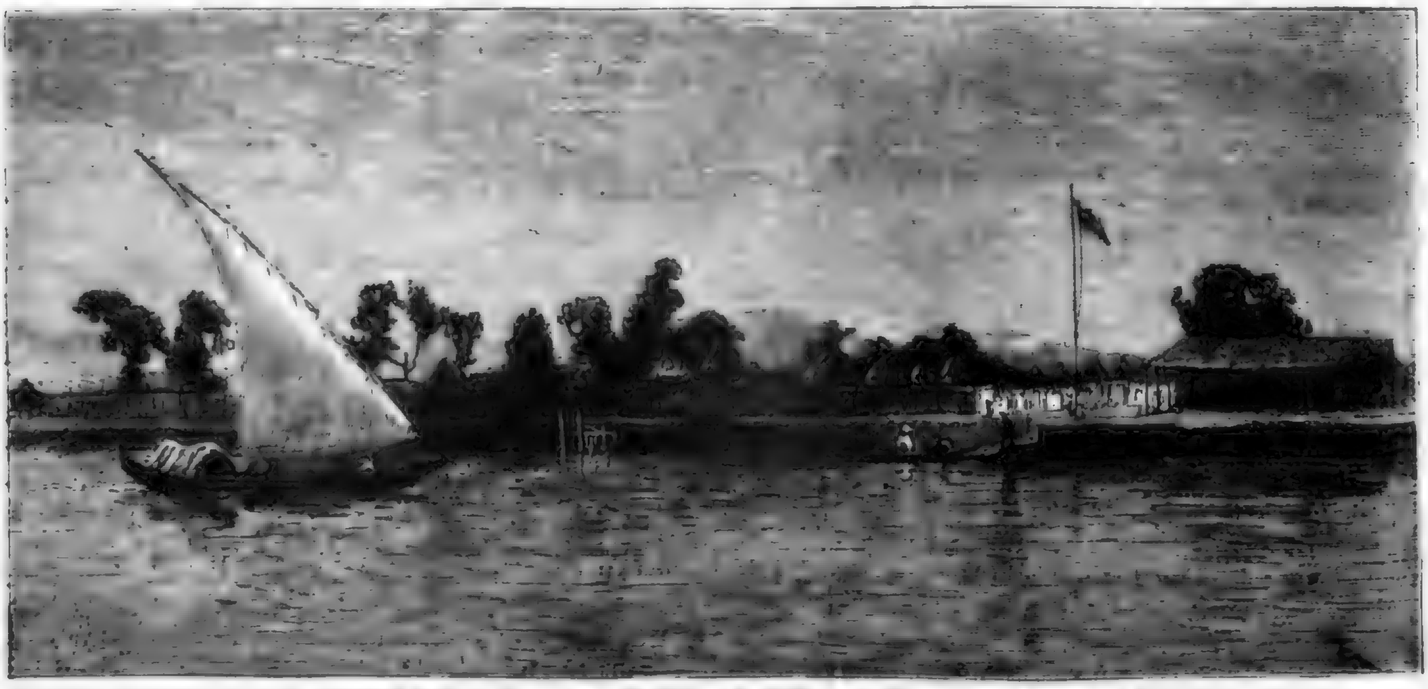
DEM-SULEIMAN, THE SLAVE-DEALERS' CAPITAL, PROVINCE OF BAHR-EL-GHAZAL.

religious views, and even as to the size of his boot, the cut of his coat, and the strength of his spectacles.

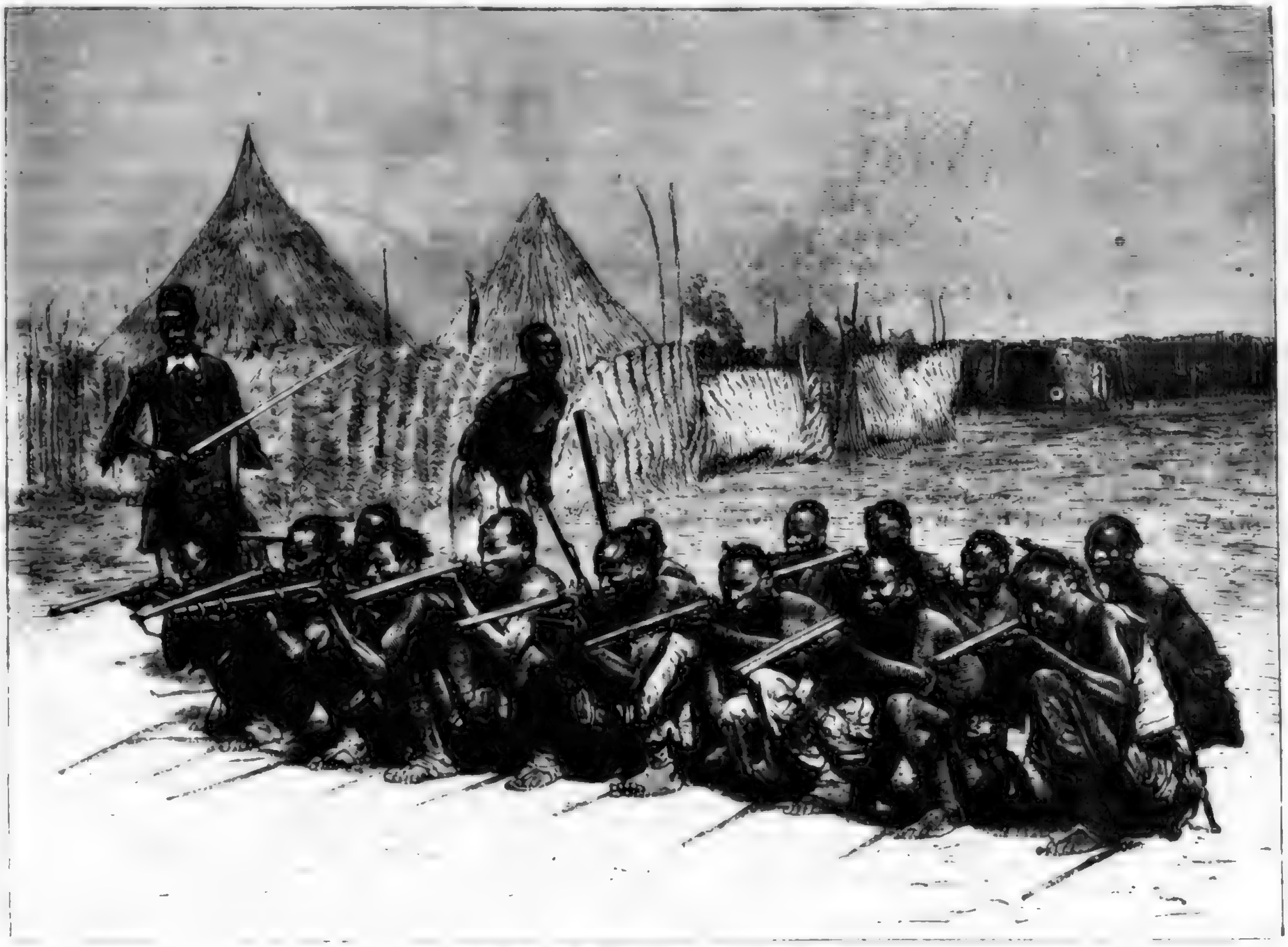


THE EGYPTIAN STATION AT KIRRI, EMIN PASHA'S PROVINCE.

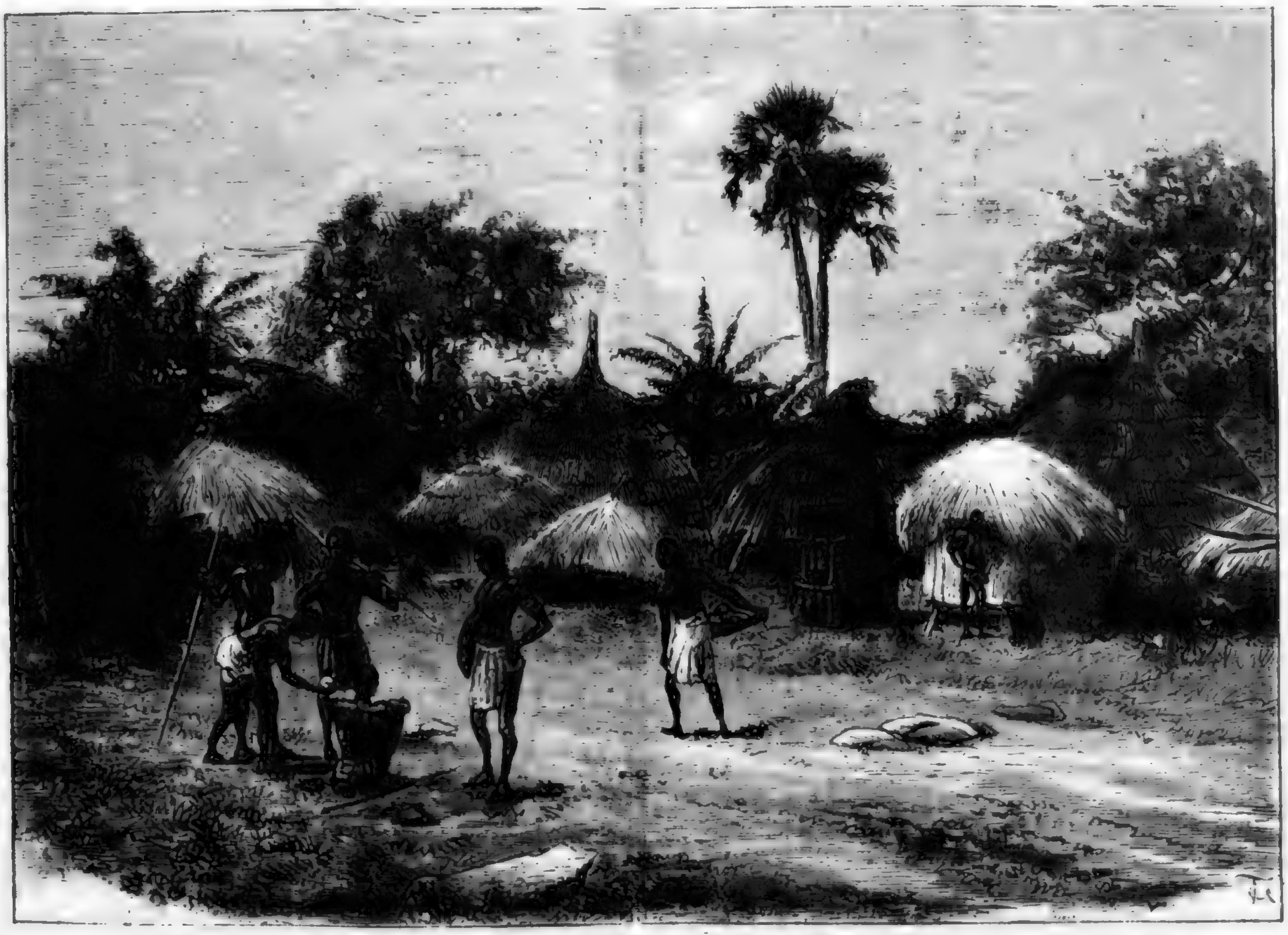
My first introduction to Emin Pasha was on the 8th of October, 1878, when, having heard of our dangerous position in a block in the Nile, he came to our rescue. We had just escaped, after forty days' detention, when we met him coming from Lado to our assistance, a few miles south of Shambil, near the abandoned Catholic Mission Station of the Holy Cross. How well I remember going on board his steamer, and the warm reception he gave us! Dressed in a white uniform, and wearing a fez, he presented the appearance of a tall, thin man of military bearing. The lower part of his face was hidden by a well-trimmed black beard, and a mustache of the same color partially vailed his determined mouth. His eyes, though to some extent hidden by his spectacles, were black, piercing and intelligent; his smile was pleasing and gracious; his actions graceful and dignified, and his whole bearing that of a man keenly alive to everything passing around him. Courteous, but somewhat reserved, he was distinguishable as a thorough gentleman. He



FORTIFIED STATION AT LADO, CAPITAL OF THE EGYPTIAN EQUATORIAL PROVINCE.



SOME OF EMIN PASHA'S IRREGULARS.



A SHULI VILLAGE AT THE FOOT OF MOUNT SHUA.

addressed us in English; but subsequently, finding I spoke German, we conversed and corresponded in that language. Emin Pasha is a remarkable linguist, having a knowledge of most European languages, of several of those spoken in Asia, and also, of many of the African dialects.

From our first meeting I felt drawn toward him, and as I became better acquainted with him my admiration and respect deepened into a friendship that has continued ever since. Whilst I was with him, he acted like a brother to me, or, perhaps I should say, like a father, losing no opportunity of giving me advice and instruction on all manner of subjects; and, thus, I have to thank him for the knowledge that has enabled me to accomplish some scientific work in Africa.

Twelve years ago, Dr. Emin Effendi—as he then was—was sent from Cairo to join Gordon Pasha, then Governor of the Egyptian Equatorial Provinces. Born in Austrian Silesia, he had been a surgeon in the Turkish Army, his medical education having been obtained in Paris, Berlin and Vienna. Gordon Pasha subsequently appointed him surgeon-general of the province, a position he continued to hold for the next four years. Medicine alone, however, did not engross his attention, for Gordon Pasha, taking advantage of his remarkable powers in dealing with natives, employed him in three diplomatic missions of no little importance, viz., two to Uganda and one to Unyoro. One of his missions to Uganda was of singular difficulty and danger. An officer, acting contrary to Gordon Pasha's instructions, had marched with 300 men to the capital of Uganda, with the intention of annexing the country, and Dr. Emin Effendi was sent to bring back the men. This task he accomplished, after much difficulty, with complete success, and without firing a shot. It was most important for Gordon Pasha to enter into friendly relations with Kabarega, the King of Unyoro, who was continually harassing the Egyptian frontier; and again Dr. Emin proved himself equal to the occasion, for he went, without escort, to Kabarega, and concluded a peace which undoubtedly saved Gordon Pasha and his few soldiers from annihilation. This mission, although so many years ago, has recently borne fresh fruit, for the friendly relations then brought about have enabled Dr. Emin to obtain some scanty supplies from Kabarega, and to send through him letters to the Church Missionary Society's representatives in Uganda, and have also assisted the intrepid Russian traveler, Dr. Junker, to escape, *via* Unyoro and Uganda, to Zanzibar.

In 1878, Gordon Pasha, in his position as Governor-general of the whole Soudan, raised Dr. Emin Effendi to the rank of Bey, and appointed him Governor of the Egyptian Equatorial Provinces, which position he has nobly and faithfully maintained up to the present time. His office was no sinecure, and the difficulty of his position can scarcely be understood in this country, and can only be fully estimated by the few Europeans who have personally visited the immense district under his jurisdiction. Gordon's master-hand, which had organized the provinces, crushed the slave-dealers, and introduced a reign of peace, had been removed, and one governor after another had allowed affairs to relapse into a state of chaos. The slave-dealers had regained some of their former power, discontent was to be seen on all sides, and it needed, indeed, a strong man to restore order. Such a man Gordon Pasha found in Dr. Emin. When the latter took up the reins of government, the only districts in peace and security were included in a belt of land on either side of the Nile, extending from Lado to the Albert Lake, and in the country occupied by the Shulis to the east of the Nile.

With such enthusiasm and power of organization did Emin Bey take up his task, that by the end of 1880 most of the stations had been rebuilt, peace and order were established therein, and all of them, then numbering about forty, were connected by a weekly post. Throughout the whole province crime was almost unknown, and, through Emin's efforts, slavery was entirely abolished, and the district cleared of the slave-dealers, who had carried on an underhand but extensive traffic up to the time of his appointment. Moreover, the Equatorial Provinces which, in 1878, were maintained at a deficit of £38,000 per annum, had, three years later, a surplus of £8,000; and this remarkable financial improvement was obtained, not by oppressive taxation, but by the practice of rigid economy and the suppression of abuses that had previously existed. To this I can personally testify.

The organization of this province has cost an immense amount of labor, and has been made possible only by rigid attention to the minutest details, and to the special characteristics of the people inhabiting the country. The population is a very mixed one, and consists of various tribes, possessing distinctive customs, speaking different languages, and having very varied characteristics. The accompanying pictures, which are reproduced from photographs taken on the spot by my friend, Herr Richard Buchta, form part of his marvelous and unique album of photographs of the Upper Nile region. The mild and docile Shulis, the brave Bari warriors, the cannibal Niam-Niams, and the musical inhabitants of Unyoro, are striking types, and will serve to give an idea of the people to whom Emin Pasha has been content to devote so many years of his life. Besides the tribes represented in his pictures, Dinkas, Madis, Makrakas, Bongos, Longos and Umiros, recognize the Egyptian rule in the Equatorial Province. I could write pages on the different customs and their manner of life, but space will not allow.

The whole province is divided into districts, each having a military station in its centre, where the tax of grain and cattle has to be paid by the natives; and it may be of interest if I here give a description of one of these forts. I will take Lado as an example.

Lado is a well-built town, the divan, offices, mosque and Government buildings being built of burnt bricks, and roofed with corrugated iron, all the other buildings being of wood and grass. The streets are wide and straight, and surrounding the station there is a broad promenade, a clear space of thirty yards being kept between the houses and the earthwork fortifications. Beyond these there are large gardens. The station has three gates, at which sentries are mounted day and night, the gates being open from 6 A. M. till 8 P. M. No gun is allowed to be fired near the station from sunset to sunrise, unless as a signal of an attack. At 5:30 A.M. the bugle sounds the *reveille;* and, shortly after, "Light your fires." At 6 A.M. the muster roll is called, and the gates are opened. The soldiers then drill, and the women begin to sweep the streets—for, in Emin Pasha's stations, sanitary precautions are adopted, and the people are taught that cleanliness is next to godliness. At 8:30 A.M. all, excepting the sentries, turn out to work in the fields, to draw water or to fetch wood; and, the dew being by that time dried up, the cattle are sent out to graze. Work lasts till 11:30 A. M., when there is an interval of rest till 2:30 P. M.; the people then set to work again till 5 P.M., when all return inside the fort.

At 8:30 P.M., the roll is called, and the gates are shut; and at 9 P.M. all fires are extinguished, an officer going the rounds to see that this regulation is carried out. Curfew, in these parts, is a very important precaution, for, should a hut once catch fire, the whole station is threatened with destruction. In the Spring of 1878, before Emin's rule began, Lado itself was burnt down, and the immense stores which Baker Pasha had taken to the province were all destroyed.

Near each of the stations are groups of native villages. The soldiers are nearly all Makraka men, and, physically, a finer body of troops it would be difficult to find. They are brave (one might almost say recklessly brave), civil and high-spirited; they obey orders with alacrity, and are at the same time intelligent in the performance of their duties. They are armed with the Remington rifle, which they pride themselves on keeping bright and clean. Their uniform, when on duty in the station, is a white tunic and trousers, boots, fez, and a cartridge-belt made of leopard-skin, which is bound round the waist and holds a sword, bayonet and knife. On the march they are dressed in brown clothes, with knickerbockers, and they seldom wear boots. I should have said they *were* clothed in this fashion, for now, poor fellows, they are scantily provided with kit.

Each large native village is required to support one or two dragomans, who act as a kind of police. These are responsible for the peace of the village, and superintend the payment of the grain-tax to the Government. Some twenty or thirty of them live near a fort; and when porters are wanted, or natives required for work at the station, they are commissioned to get together the requisite number.

One of the illustrations gives a very good idea of these men. They are here formed up as if to resist the charge of slave-dealers. They wear few clothes, are all armed with double-barreled guns, and are, as a rule, good shots. They are very reliable troops, have no fear, and fight like lions; and, what is more noteworthy, they can live on two or three handfuls of grain a day, and never grumble for their pay, however long in arrear it may be. The original picture was taken by Herr Buchta at Dem Zebehr, once the headquarters of Zebehr Pasha, prince of slave-dealers. His house, the only one of sun-dried bricks in the district, can be seen in the background of another illustration. If it could speak, what a ghastly tale of bloodthirsty tyranny it could tell! for from this place some thirty or forty thousand slaves used to be exported annually; and, now that it has been retaken by the slave-dealers, it has probably again become the centre of human traffic.

In the Equatorial Provinces the only difficulty the authorities experience is in keeping up a strict discipline, without which it is impossible to maintain a good Government. The natives require firm, but judicious, control. It is imperative that the orders of the Government should be obeyed, and to obtain this result the natives need more supervision than would be requisite in more civilized districts.

Dr. Emin Pasha's life is a laborious one. When at Lado, in addition to the cares of government, he finds time to relieve the physical sufferings of his people. At sunrise every morning he may be found in his hospital, either prescribing for or operating upon his numerous patients, and at night, when Government duties are over, instead of seeking well-earned repose, you would see him writing by the light of candles, made by himself, those reports on scientific subjects that have enriched the pages of so many learned periodicals. His intimate acquaintance with the various sciences is quite remarkable: anthropological, botanical, geographical, geological and philological studies serve to occupy his leisure moments. In addition to all this, he has found time to teach the people to work for the sake of work itself, and not from compulsion; good roads have been constructed, wagons made, and oxen trained to the yoke under his superintendence; the people have been instructed in weaving, and he has introduced the cultivation of cotton, coffee, rice, indigo and wheat.

The contrast between Dr. Emin Pasha's province and the surrounding ones is very marked, for, in the latter, the slave-dealers are carrying out, unchecked, their inhuman trade. Brutal acts of atrocious cruelty are daily perpetrated, villages are sacked, the aged killed, the strong men tortured with fiendish ingenuity, and the women and children are carried away as slaves.

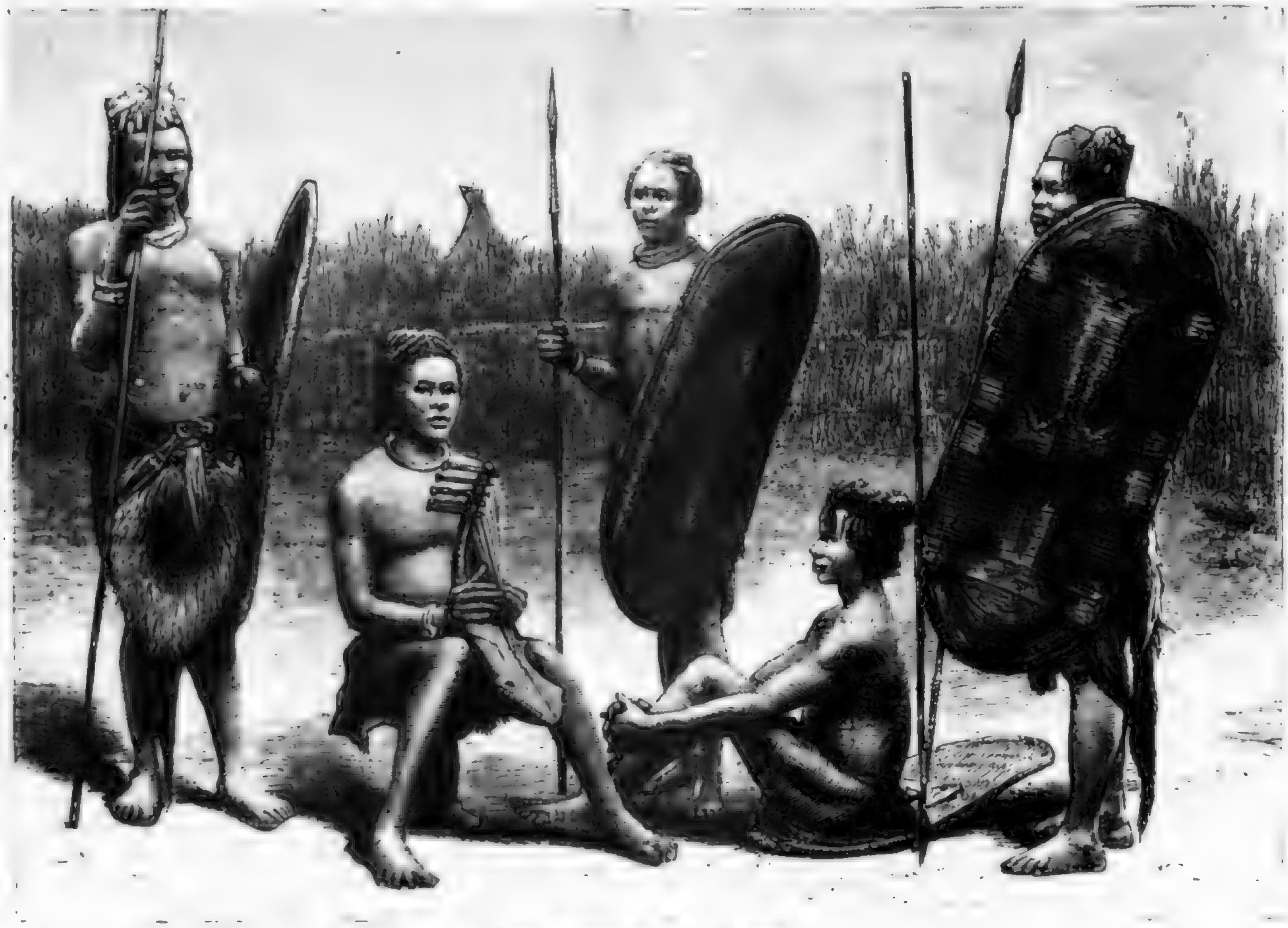
Should Emin fall, or the relief expedition arrive too late, his province will inevitably relapse into the same hopeless condition; only it must be remembered that the people would then feel their position far more keenly, having experienced for some years a beneficent rule. How much this has been appreciated by them may be understood by the desperate way in which they have fought against their foes, knowing, as they do, the misery they would suffer were they to be conquered. It is not as if they had been in the receipt of their pay, or as if the prospects of rich rewards had been held out to them. Pay they have not seen for years, clothes they have none, and yet, though decimated by starvation and disease, they have fought as only men fight whose homes and country are at stake.

There are, no doubt, some—I hope but few—who will fail to see the necessity for the relief of Emin Pasha. I have heard it said, "He could come away if he liked," to which I would reply, "Yes, he could escape alone with a few picked men, were he a coward or a selfish man; but in so doing he would have to leave behind the Egyptian officials, their wives and their children. Being, however, true, brave, and unselfish, it is as impossible for him to desert his trust as it was for General Gordon to yield to the wishes of men who placed expediency before honor, and who, apparently, cared not one straw for the shame of a broken word."

In order to avoid any possibility of mistake, and to show that Emin Pasha had no choice left him as to the advisability of evacuating the province committed to his charge, it may be well to mention that, in April of 1882, he went down to Khartoum expressly to confer with his superiors; but he was ordered "to return to his post, develop his province, and protect his frontier." Since that time, and until very recently, no news of any kind has reached him. He fully appreciated the difficulties of his position, but still he has not given up all hope of England helping him. He writes, "I have certainly some glimmerings of hope that, as Egypt appears to be unable to send us aid, England may, at some future day, take advantage of the position in which we find ourselves, to remain true to her former traditions of a humanitarian and civilizing mission."

It is at last decided that an attempt shall be made to send him the relief he so urgently needs. Although the British Government do not participate in the Relief Expedition, as one had earnestly hoped they would, yet they countenance it. Henry M. Stanley is the leader. The funds for the expedition are provided in part by a grant of money from the Egyptian Government, but chiefly, I believe, by a small group of Scotchmen, who thus generously fulfill the traditions of the past.

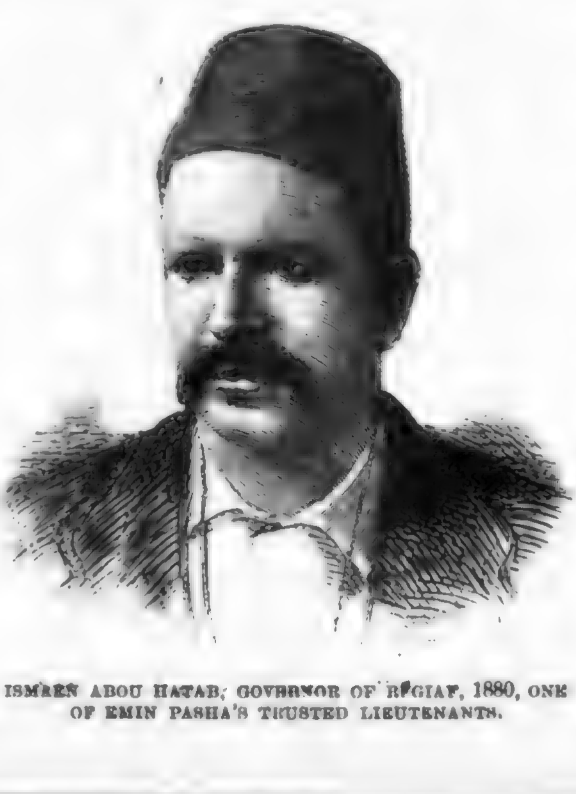
XUM



MEN OF THE NIAM-NIAM TRIBE.

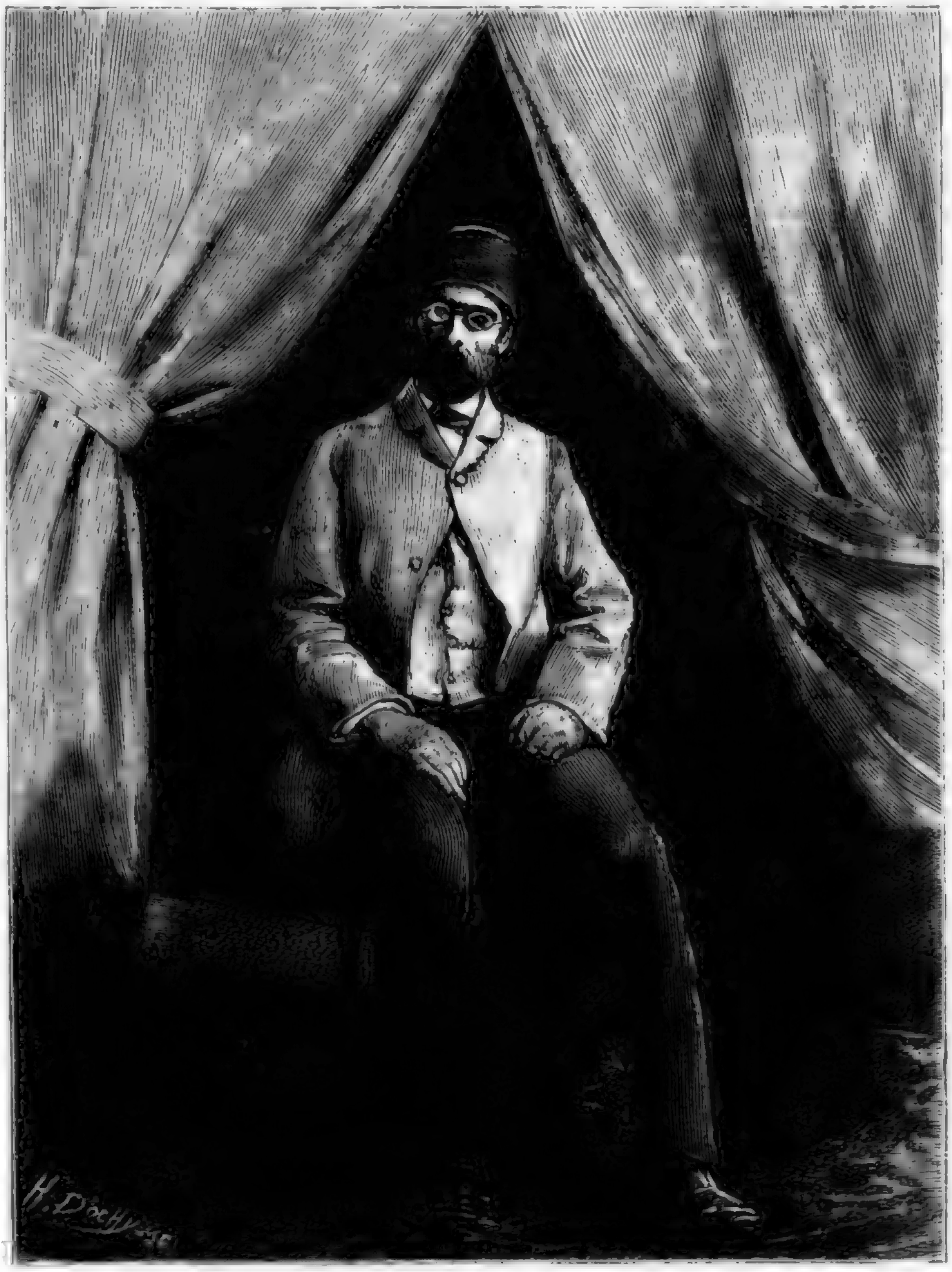
Mr. Stanley, at the head of his expedition, is now on his way to Africa, on a mission of which he may well be proud. It is not known by what route he will reach Emin Bey, and this judicious element of mystery will, no doubt, add a charm to the interest with which the progress of his undertaking will be followed. For the past few months the question of which route is the best has formed the subject of debate both in the public Press and in geographical magazines. In concluding this article, I propose to point out the routes by which the Relief Expedition might reach Emin Pasha's province, all of which appear to me to be worthy of consideration. I shall, at the same time, indicate the difficulties and dangers attending each of them.

The first route, and the one proposed by Mr. Joseph Thomson, starts from Mombasa, on the east coast, leads through the Masai country, passes Mount Kenia and Lake Baringo, and reaches Emin Pasha's province at either Foweira, Koro, or Fadjulli. Mr. Thomson proposed to take a caravan of some four hundred porters and fifty or sixty camels and donkeys. The advantages he claims for this route are these: "It is the shortest and most healthy; the country presents no topographical difficulties; camels and donkeys agree admirably with the climate. . . . Taking everything into consideration, I myself (Mr. Thomson) pronounce emphatically in favor of the Masai route." The time estimated from Mombasa to Emin Pasha's province is three to four months. The late Dr. Fischer also recommended this route, but, while not saying that it is an impracticable one, I think that its difficulties and dangers are too great to be risked. The greatest objection I see to it is, that the King of Uganda would inevitably hear of the expedition, and would most certainly try to prevent its reaching its destination. Since the murder of Bishop Hannington he has been kept in constant alarm by rumors from the east, partly arising from Dr. Fischer's journey that way, and partly from the German annexations on the East Coast. It must be remembered that Mr. Mackay, of the Church Missionary Society, who has nobly held his post for seven years, and who is now virtually a prisoner in the King's hands, is still in Uganda, and I think that an expedition for the relief of Emin Pasha should avoid any route which would



ISMAEN ABOU HATAB, GOVERNOR OF REGIAF, 1880, ONE OF EMIN PASHA'S TRUSTED LIEUTENANTS.

in any way render his position more precarious. It should not be forgotten that Mr. Mackay, at great personal risk, has done all he could to help Emin, and, indeed, he has formed the channel of communication between him and Zanzibar, thus generously repaying the services which Emin rendered to the Church Missionary Society's missionaries in previous years. The district, too, to the northeast of Uganda, which would have to be passed by a caravan following this route, has been the slave-hunting ground of the Waganda for many years, and its inhabitants fear them, so that the expedition would have to rely upon its own resources in withstanding any attack the brutal boyking chose to make upon it. Any one who remembers Mr. Stanley's account of the military organization of the Waganda, their prowess, and the hundreds of thousands of men they can put in the field, must be convinced that it would require a strong party, indeed, to cope with this the strongest Central African power.



EMIN PASHA IN HIS TENT.

The second route to be mentioned leads direct through Uganda. This route I believe to be utterly impracticable. Although I think it is very probable that, backed up by strong letters from the Sultan of Zanzibar and the British Consul-general there, the leader of a relief expedition might receive a friendly invitation to pass through Uganda, yet I am convinced, knowing the people as well as I do, that, once there, no expedition would ever be allowed to pass on to the north. One excuse after another would be made, one demand for presents after another would be put forward, until, at last, either the patience or the resources of the expedition would be exhausted. The Wagandas' policy has remained unchanged—at least the policy of the Court party—for years; notwithstanding the intercourse they have had with white men, they fleece all Europeans, and will continue to do so, until they have learnt a lesson which it would be out of the province or power of a relief expedition to teach them.

I now come to the third route, and the one I have steadfastly advocated from the first, because I believe it to be, all things considered, the safest, the most rapid, and the most practicable. It is as follows: An expedition should start from Bagamoyo, by a direct route to Mkumbiro, then follow Stanley's old route as far as Nyagoma, and strike west till Lake Alexandra is reached—thus giving Karagué, which is tributary to Uganda, a wide berth. It should subsequently skirt Lake Alexandra, and take a northerly route to the Muta Nzige, follow its western shores, and strike directly for the south end of Albert Lake. Before arriving at this point, however, messengers should be sent on to Emin Pasha, who would meet the expedition with his two steamers and lifeboats at the south end of the lake.

By taking this route, it is most probable that all possibility of coming in contact with the Waganda would be avoided; in fact, if the leader of the expedition kept his own counsel, the Waganda would not necessarily know of its destination, as several caravans go by that route year by year as far as Mkumbiro. Even if they did hear of the expedition, they could do little or nothing to delay it; for they are not in the habit of making raids toward the southwest, and the people there do not fear them.

The only disadvantage presented by this route is the fact that it leads through about three hundred miles of unexplored country; but it must be borne in mind that either by the Masia route or by the Congo the unexplored district to be traversed would be far longer, and the tribes just as warlike and unknown.

The fourth route that might be taken is, theoretically, an enticing one. It has been proposed to send an expedition up the Congo, and either go up the Aruwimi, or

XUM

Biyerré, to a point situated some five hundred miles, as the crow flies, from Wadelai, or to navigate the Mobangi, which is probably a continuation of the Welle-Makua River; for Dr. Junker has telegraphed from Zanzibar that he found the Welle-Makua generally navigable as far as 22° east longitude, at which point he was only about one hundred and fifty miles distant from the point reached by Mr. Grenfell in the steamer *Peace*.

The objections to this route are—the time it would occupy, the delay that would inevitably attend the passage of the expedition through the Niam-Niam district, and, lastly, the disturbed state of the country near Stanley Falls. This would, however, be an admirable route for the return journey, when the Egyptian women and children would have to be transported to the coast, and when the expedition would be reinforced by Emin's soldiers.

These various routes will, I trust, enable my readers to clearly understand the whereabouts of Emin Pasha, and to follow with an intelligent interest and hearty good wishes the expedition sent to his relief.

DEMONIAC INFLUENCES.

THERE is a curious contrariety in human affairs, showing itself sometimes in a manner almost tragic, or leading to tragic results; as when a murderer, while flattering himself that he has taken every possible precaution, forgets the special one which would have secured to him immunity from danger; and sometimes, and more often, in the most trifling matters of everyday life. The difficulty of finding a policeman when one is wanted is proverbial. Who does not know that it is always when one is just starting on a journey that strings come off and buttons are found wanting? Did any one ever search for a mark on a pockethandkerchief, or any other article possessed of four corners, and find it before he reached the fourth? Perhaps, even, he may, by the time he had made a careful scrutiny of each, have discovered that there was no mark at all, though before the investigation he could almost have taken his oath, if called upon to do so, that all his linen was marked. The careless little girl in "Original Poems" misses her day's pleasure "for want of just a single pin," and the story of her sad fate, as she hears the coach drive up to the door and turn away again, having found her unprepared to join the happy company of holiday-makers, has been handed down as a warning to posterity. To be sure she was careless and thoughtless, and wasted her time, and that is the moral of the piece; but there remains the usual difficulty, pointing, apparently, to some occult and sinister influence—the impossibility of finding the one single pin at the one precise moment when its presence was indispensable. The question as to what becomes of all the pins might lead us too far from the scope of this article; but surely since they were first invented enough must have been lost to produce some change in the earth's surface. Who has not noticed that on a bitter Winter morning you may expect, when you come down to breakfast, to find a miserable handful of fire smoldering, merely trying—and trying probably in vain—to keep itself warm, and quite powerless to impart warmth to the shivering mortals who vainly endeavor to coax it into a blaze; while only let the weather change, the frost give out, the air become soft and mild, and you come down-stairs to a fire roaring half way up the chimney. You are tempted to lay the blame upon the perversity of the housemaid, but is not the cause something far more subtle?—though the human element certainly must enter into the case, as also into the kindred phenomenon of plates. Plates are certain to be merely tepid if the eatables on the table are likewise deficient in caloric, but only let the pudding be just taken out of the oven and scalding hot, and you may be sure that they will be heated to such a degree that you will not be able to touch them without burning your fingers. If the kitchen chimney catches fire, ten to one it is when you are expecting guests to dinner. If one's keys "loose theirselves away," as an old woman of our acquaintance used to say, is it not always at the exact time one happens to want them? There are days in one's life when these, and other small calamities, accumulate upon one's devoted head till one is ready to exclaim with Mrs. Gummidge: "I'm a lone, lorn creetur and everythink goes contrairy with me!"

RINGS.

RINGS—that is to say, finger-rings, the most primitive, as well as the most universal form of the jewelry of all nations—have been quaintly defined by a jocose old writer as "movables put upon the fingers, either by way of ceremony, authority, affection, or ornament, all of which influences have been more or less conducive to their wear." The derivation of the word is Saxon—*hyring*, a circle; apropos of which origin the same author we have just alluded to, boastfully says, "that it has neither the smack nor the twang of any of the legion of foreign tongues with which we have compounded the English language."

The antiquity of the use of rings is lost in the remoteness of ages long past and gone. Pliny tells us that we are utterly in the dark as to the person who first invented, or who first wore, a ring; and he bids us accept as fables what is written in mythology of those of Prometheus and Midas. The people who give us the starting point for finding rings in use among them are the Jews; for in Genesis we read of Judah giving Tamar his signet—notably his signet ring—to hold as a pledge until his promise to her of a kid from the flock should be redeemed. So, also, in Kings we find that Jezebel sealed the warrant for the destruction of Naboth, the Jezreelite, with Ahab the King's ring, which, no doubt, he habitually wore as a symbol of his authority and power. Other portions of Holy Writ may readily be advanced to strengthen the point that the Hebrews, even in their earliest times, used rings; those we have given, however, will suffice for our purpose. But contemporaneous with God's chosen race other nations besides were addicted to the wearing of rings, the Egyptians clearly so; for Pharaoh, we read, took his ring from his own finger, and put it upon Joseph's, as a mark of the trust and command he delegated to him. The ancients—Chaldeans, Babylonians, Persians and Greeks—likewise used the ornaments we are speaking of, as appears from many a record both in holy and in secular writ; and that the Macedonians, also, did so is apparent from Alexander the Great sealing the letters he wrote either with his own or with King Darius's ring; so, at least, Quintus Curtius has it. The Greeks, who, in their sybaritical eras, became the most effeminate wearers of jeweled *annuli*, are given credit for knowing nothing of these ornaments at the time of the Trojan War, as no mention of them is made by Homer; and before the reigns of Numa Pompilius and Servius Tullius the Romans are also said to have been in ignorance of the finger-ring, but which having acquired, they out-Heroded Herod in the numbers and richness of the gewgaw. At first they contented their fingers with one ring, made of iron, as the Lacedemonians did; and Marius, in his third consulate, was the first who deviated from the base metal, and wore a ring of gold.

But this example soon found many followers, and silver, either plain or gilt, gold, pure or amalgamated with other metals—even iron welded to, or inclosed in, a casing of more valuable ore—became general and fashionable circlets for the fingers. Sometimes an eccentric wearer would have his ring iron, with a seal of gold; sometimes he would choose to have it solid and heavy; sometimes hollow and light; sometimes the signet-stone was engraven, sometimes plain, the cutting being either in relief or in intaglio, *gemmæ sculptura prominente*, or *gemmæ ectype*, as the case might be. But from this comparatively simple kind of ring, fashion soon merged into more luxurious and costly ones, and it became common to have the ornament, of whatever metal made, profusely set with precious stones, in single, double, or even in triple rows; and not only that, but to possess suites of them, suitable for different seasons of the year, for different days of the week, and even for different hours of the day. This *ultima thule* of absurdity is alluded to by Juvenal in his seventh satire, where he speaks of *annuli semestris*, and of Summer and Winter rings.

The manner of wearing rings has been various. From the writings of Juvenal, it would seem that the Hebrews wore them chiefly on the right hand, and possibly its index finger. Among the Romans, before they came to be adorned with stones and their numbers were limited, "everybody wore them, according to pleasure, on what hand and fingers they liked. But when gems were added, they wore them altogether on the left hand, and it would have been held an excessive foppery to have put them on the right." Our oft-quoted authority, Pliny, says that rings were at first put upon the fourth finger, subsequently on the second, then on the index, then on the little finger, and, last of all, on all the fingers and thumb, excepting the middle finger, which was never so adorned.

The Greeks wore their rings altogether on the fourth finger of the left hand, for much the same reason as led to that finger being selected for the marriage-ring—namely, that it was believed that a very delicate filament of a nerve ran from this digit to the heart, holding with the organ direct communication and sympathy. The fact that anatomists soon discovered the fallacy has not, even to this day, done away with the idea. And apropos of wedding-rings, *annuli sponsalitii*, as they were named, some authorities trace their origin to the Jews, founding their opinions upon well-known texts recorded in Genesis, Exodus and Esther; but, on the other hand, Leo of Modena, a rabbi of the fourteenth century, says that the early Hebrews used no wedding-rings, though a ring, as a symbol of representative authority, passed from husband to wife at the marriage service. John Selden, in his "Uxor Ebraica," substantiates this, adding that the wedding-ring was but in lieu of a piece of money of the same value, "which had used to be given in the primitive Jewish eras as the purchase of a bride." The Greeks and the Romans followed the same practice, and the early Christians took it up, as appears from the writings of Tertullian. But presently the money value, so to call it, of the woman fell into disuse, the ring remained as its acknowledged substitute; and in the Roman and Oriental Churches, where marriage is a sacrament, the ring receives the blessing of the priest before it is placed upon the finger, as several old liturgies direct.

In days of yore, certain state dignitaries only were allowed to wear rings. Senators and ambassadors of Rome were for a long time the sole wearers; then came knights and others of a lower grade in social position; then the *liberti*, or freedmen; then soldiers, and ultimately even slaves, save and except that their rings were bound to be of no higher metal than iron. The priests of Jupiter and other gods also wore thumb-rings, and from them, no doubt, descended the practice among dignitaries of the Christian Church, such as pontiffs, cardinals and bishops, significant of their spiritual wedding with the Church.

There were some curious ideas once in vogue in regard to the mental and physical qualities of the wearers of rings. If worn on the forefinger, the ornament was supposed to indicate a haughty, bold and overbearing spirit; if on the long finger, prudence, dignity and discretion; if on the marriage-finger, love, obedience and subjection; and if on the little finger, strength and a masterly spirit.

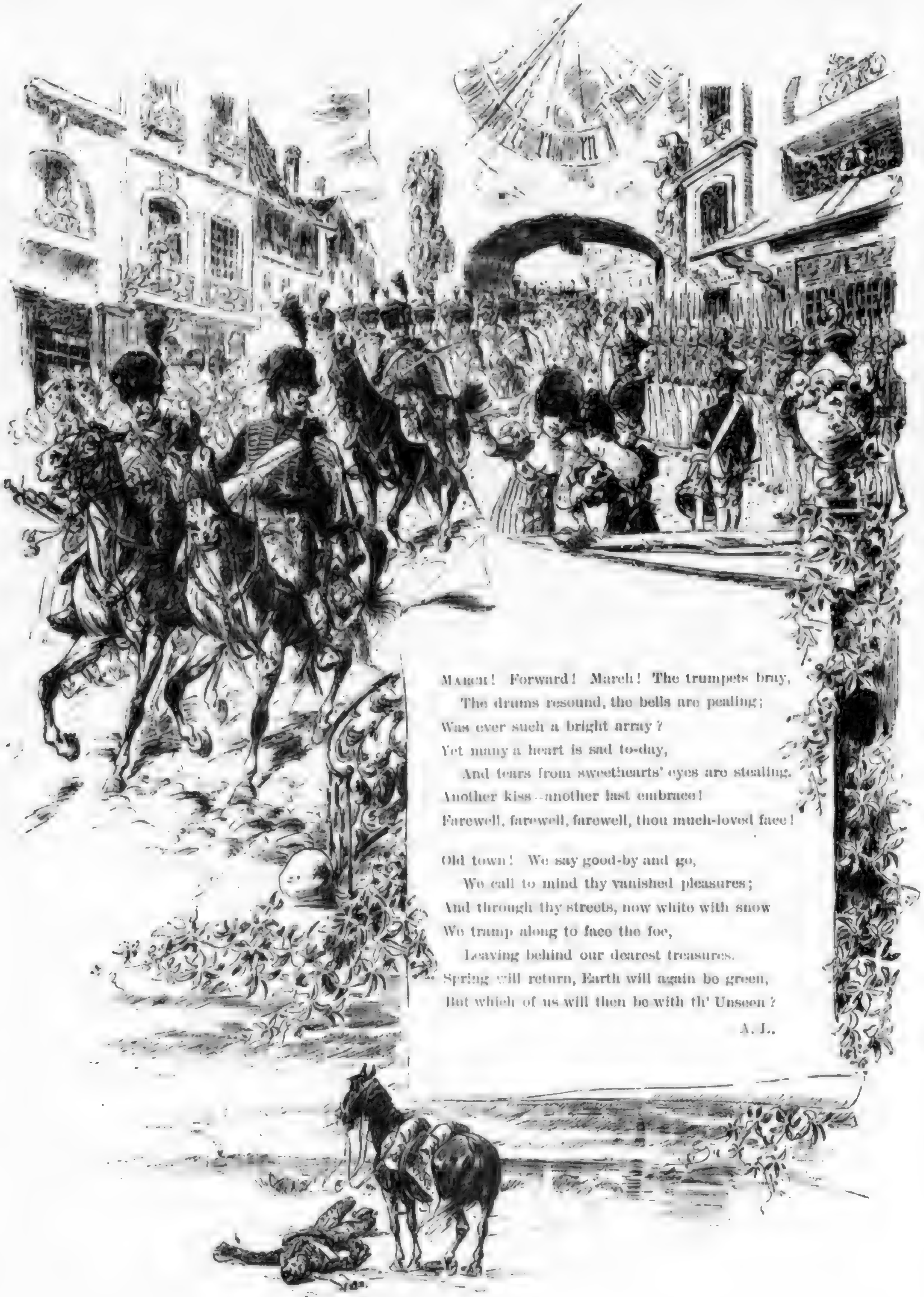
Rings have always been a fertile source for attaching thereto mystical properties and fanciful legends. Thus we have Polycrates's ring; the enchanted ring in "Orlando Furioso"; Aladdin's ring; Solomon's ring; the wonderful three-colored stone ring in the brain of Reynard the fox; that ring of invisibility which Otnit, King of Lombardy, possessed; the ring of Gyges, and many others, which space will not allow of our even enumerating. These ornaments, too, especially when bestowed as love-tokens, have ever found favor with the poet; and although the poetry of the ring has been chiefly mere doggerel, such as "In thee, my choice, I do rejoice," or "Not two, but one, till life is done," yet many a time and oft has the muse delivered itself of words of

> "So sweet breath composed,
> As made the gifts more precious."

Lastly, it may not be generally known that rings made of twisted rushes were once upon a time substituted for wedding-rings of gold in marriages never intended to be permanent and indissoluble, and that so common and demoralizing was this practice becoming in the earlier part of the thirteenth century, that Richard, Bishop of Salisbury, in the year 1217, forbids the "putting of rush rings, or any like matter, upon women's fingers," tricking them into mock nuptials.

WEIGHT OF THE BODY.—According to experiments carried out by the Belgian *savant*, Quetelet, a man attains his maximum weight toward his fortieth year, and begins to lose it sensibly toward his sixtieth year. A woman, however, does not attain her maximum weight until her fiftieth year. The ages at which people attain their maximum weight and the weights themselves differ in the different classes of society. In the affluent classes the average maximum weight is 172 pounds, and is attained at fifty years of age. In the artisan class it is 154 pounds, attained at forty. Amongst farm laborers it is 171 pounds, attained at sixty. In the average classes it is 164 pounds, and is reached between forty and fifty years of age.

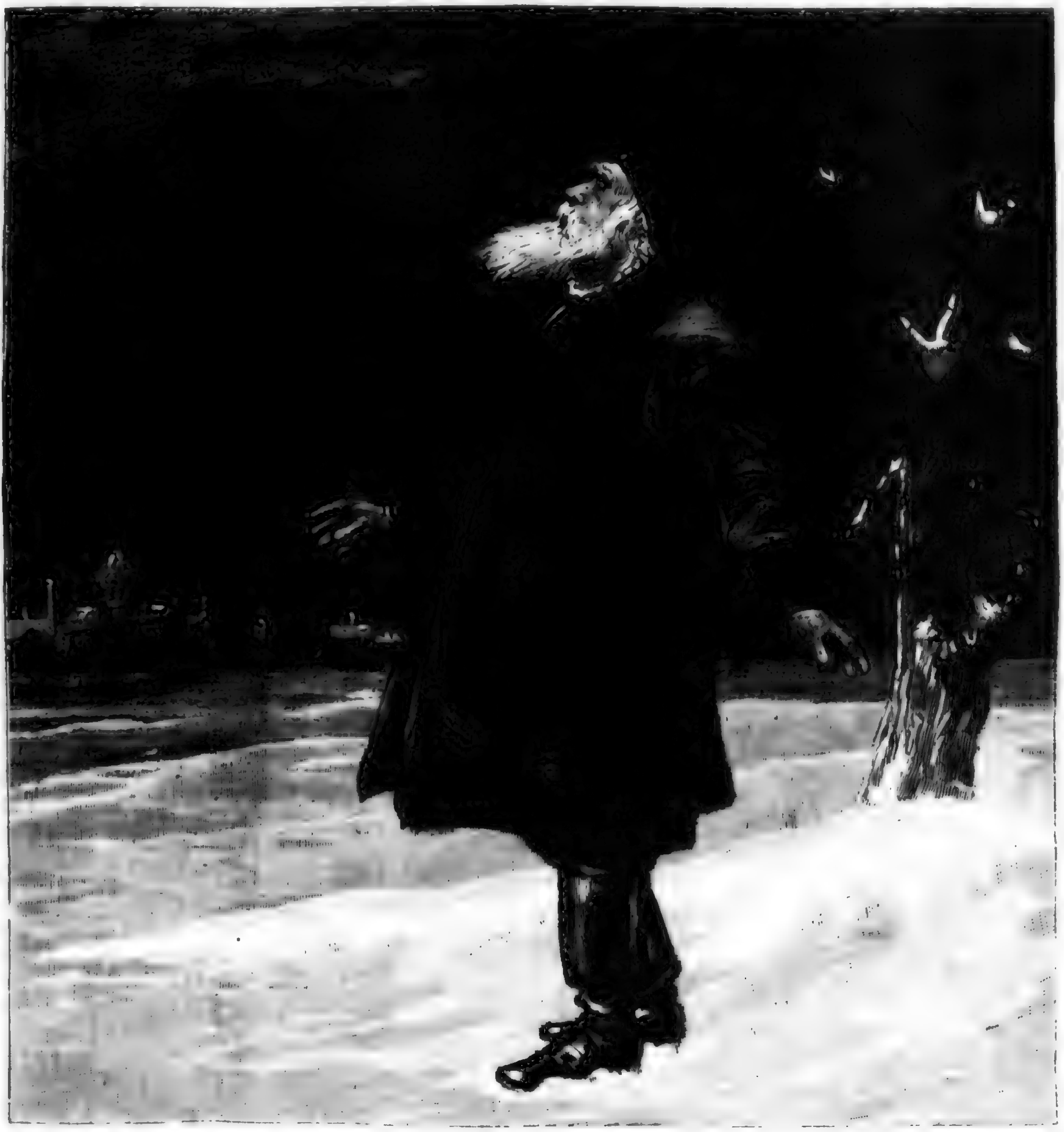
POLISHING STONES.—The Hindoos polish all kinds of stones by means of powdered corundum, mixed with melted lac. The mixture, being allowed to cool, is shaped into oblong pieces of three or four inches in length. The stone is polished by being sprinkled with water, and at the same time rubbed with these oblong masses; and the polish is increased by the successive use of masses of finer and finer grain.



MARCH! Forward! March! The trumpets bray,
 The drums resound, the bells are pealing;
Was ever such a bright array?
Yet many a heart is sad to-day,
 And tears from sweethearts' eyes are stealing.
Another kiss—another last embrace!
Farewell, farewell, farewell, thou much-loved face!

Old town! We say good-by and go,
 We call to mind thy vanished pleasures;
And through thy streets, now white with snow
We tramp along to face the foe,
 Leaving behind our dearest treasures.
Spring will return, Earth will again be green,
But which of us will then be with th' Unseen?

A. L.



"'RING ON!' HE EXCLAIMED, AS THE BELLS FROM MANY A CHURCH-DOME WITHIN THE DENSELY POPULATED MUSCOVITISH CITY CLOSE AT HAND RANG OUT THEIR MERRIEST CHRISTMAS CHIME."

SWORN WITHIN HEARING OF THE BELLS.

By Sibella B. Edgcome.

Chapter I.

"Sworn by all that I most dearly value!" And with these words the ancient-looking Russian Jew bent himself three times toward the earth, crossing himself meanwhile vigorously.

He shivered, even, as he uttered the words; folded his arms yet more firmly together, sheltered as they both were by the sleeves of the thick fur coat which he wore, and glanced fixedly upon the deep and also frozen mass of snow surrounding him on all sides.

"Ring on!" he exclaimed, as the bells from many a church-dome within the densely populated Muscovitish city close at hand rang out their merriest Christmas chime. "I hear you, bells. Be patient with me—that is all I ask. You friends of long ago; who alone, of all created things, know not even the name of change!"

The invocation, for such it indeed seemed, fell all unheard upon that bitterly frosty night air. The ice-bound plain upon which Michel Michelovitch now stood only showed itself in picture-like but yet ghostly fashion all around.

"Branded!" he burst forth once more, as if now wholly unable to restrain himself, as thoughts, how intense and bitter, fell fast and thick upon his memory. "But the worker of such a wrong shall smart for it. The Jew's vengeance! Ha! ha! It is the fashion nowadays to scout the money-grubbing Jew, as folks call it," and he snapped his fingers derisively in the air. "But wait a bit. Every dog has his day. Why, then, not I? Vengeance, I repeat! And Heaven will help me."

An hour at least had passed away before Michel again crossed the threshold of his home. A home, too, of which to be proud. Everything was there that wealth could give. All luxury. All comfort.

His daughter was waiting for him on the threshold; beautiful and bewitching as only a young Jewess in those Eastern regions can be. Her arm was laid softly around her father's neck, and she had drawn him in sweet womanly fashion within.

"I feared that something was amiss. You are so late in coming."

"*Doosetchka!* (darling)." It was all he said in answer.

"I have all ready—just as in olden days. You are ready to come in? Oh! won't you?"

He laid his already withered fingers upon her rich and glossy hair, and prayed aloud that "the father of Abraham, Isaac and Jacob"—so ran the Jew's simple wording—might bless his Miriam and keep her safe from harm, "from further harm," he added, tenderly, almost beneath his breath: then glanced around, as if fearful that some one was within hearing.

But no: they were alone—these two.

What meant it all—this air of unexpressed fear; nay, even dread, pervading all—this strange shadow of mystery?

And luxury, in the meanwhile, surrounding all. Poverty, evidently, at an utter discount—wealth a premium.

Such, indeed, was the picture. Again—what was amiss?

"You must forget everything, father mine," came steadily; also in true woman fashion. "The tale is ended now, the game played out. Remember that?"

"Ay, daughter!" But the Jew spoke dreamily.

"Well, then," came firmly. "Why not rally your energy again? Why yield thus?"

"Right, Miriam. I know that full well. But the present days, remember, are dark ones. The Jew's heart fails him."

"Fails, then, to trust in Heaven? Is that your meaning? God forbid!"

The Jewish father gazed a moment: then withdrew his glance, and faltered:

"This, after all that you have suffered, daughter?"

"Yes."

The shadows fell softly on the thick white snow without; the lights burned brilliantly within.

The bells from every church and cloister round rang hopefully, right joyously. If gloom was near at hand, at least they did not seem to recognize the fact. Rather, most surely, would they seek to chase all gloom away.

"Oh, sadness flee
And trust in me!"

Thus told the bells, in soft accordance with the sweet words of old.

"It is better that we should be alone to-night—just you and I," said Miriam, later on, as they stood side by side near the lighted-up tree.

The Jew shook his head in answer; resolutely, and also with an air of stout defiance.

"It would have been impossible to bear the presence here of others," he said, huskily. "The two or three who know that you are here expected, I could see, an invitation as of old; but my gifts, *doosetchka*, were all for you yourself this time."

What gifts, indeed! What jewels rich and rare for the Jew's only daughter! Who would not envy her?

The sole loved heiress of a wealthy father!

The hour of midnight was signaled by every clock around in that large city. Miriam knelt in simple, childlike fashion at her father's feet. His hand was laid upon her head.

A father's blessing! Would it then, avail?

Ay—perhaps only would it serve to benefit that pensive Jewish maiden as would the many jeweled ornaments which he had just bestowed upon her—the bracelets encircling her arms, the rings, the necklaces, and who shall say what else?

Her beauty shone out now more strikingly than ever beneath the light of those dazzlingly sparkling, gilded chandeliers.

"And thou shalt wed as thou pleasest—choose the man after thine own heart," came in a low, earnest voice. "I retract the refusal—God forgive me!—once uttered in the past. The Jew has said it, and, God helping him, he will keep his word!"

The echoes caught up the words, and whispered, softly:

"God helping him!"

Was Miriam's cup of joy too full?

Why did she burst out weeping suddenly, and hide her face within both hands, and sob so fast?

She only knew that a long, weary tale was ended now; that what had been refused emphatically only three short years ago was now permitted—ay, and that tenderly.

The daydream! but now such no longer.

A bright living reality on this Christmas Eve, the promised wife of Karl Karlovitch.

Yes; she would say her prayers the coming Christmas morn—how earnestly, how trebly earnestly!—in that exquisite Russian *Sabor*, or cathedral.

The minutes sped on joyously in Miriam's heart.

The father's heart, too, seemed at rest for one brief space.

The sound of the ringing of the large outer bell in the court below at that moment arrested their attention.

The summons, however, was probably intended for those occupying another suite in that monster mansion. It was not likely that any one would seek to intrude at such an hour upon Michel Michelovitch and his daughter.

There was a noisy slamming of doors down below, and also a sound of voices. Then came the inquiry, uttered in the corridor just outside the Jew's apartments:

"This, then, is the house of Michel Michelovitch?"

"It is. He is at home also, I know."

Within the space of two minutes the newcomer stood within the Jew's spacious *salon*; and the next instant one glance was enough—Miriam had fallen senseless at her father's feet.

Chapter II.

"But why your daughter should have received me thus is beyond my comprehension," urged the visitor later on, for sleep somehow seemed impossible to any one that night within Michel Michelovitch's abode. "True, we came across each other on the route, but what of that?" And even as he spoke he snapped his fingers indifferently.

Even, however, as the words fell, the Jewish father shook from head to foot, it seemed almost with an untold sense of dread.

He knew nothing of the stranger—nothing whatever—whose only plea for coming at that hour was that he had arrived late that evening in the Russian city, that he had not many hours to remain in it, and that this, therefore, had seemed to be his only opportunity for returning a small book which Miss Miriam had evidently dropped just prior to their one and only parting, and which he took it for granted she would like to possess once more. Thus ran his story.

Clear, also, was it to the Jew's own mental vision that the stranger admired Miriam's beauty.

Was it to be wondered at?

And Miriam, in the silence of her own room?

The sense of faintness which had so thoroughly overpowered her upon first seeing the newcomer had not easily passed away. She trembled, as if some sense of coldness had, in all unlooked-for fashion, fallen upon her heart.

Ah, why should she ever have seen this stranger again? Why this even undreamed-of recognition, linking her once more, although only in memory, with an ugly past, recalling days which it were better far should be forgotten?

God take away the memory of those terror-stricken days—this was her prayer.

The stranger had, upon Miriam's sudden faintness, explained quickly to the astonished, and also alarmed, father, that he could, he thought, explain the cause; but he spoke in a low voice, having already drawn the Jew on one side for that express purpose.

"I listen!" but even as the words came the shadow of coming evil seemed already to have fallen upon Michel Michelovitch's path. His lips trembled in spite of himself, and yet they were firmly compressed together, as if in deep significance of the stern will within.

Yes; the Jew's heart was very strong in the midst of all.

"I saw your daughter, then, with the rest of the gang," whispered the stranger, steadily, but, nevertheless, not without feeling. "Our paths crossed only once, it is true, but I must have known her again anywhere——"

What more the stranger would have said was known only to himself, for at that moment the Jew's large hand was laid firmly upon his mouth, and, in a hoarse voice, he hissed, rather than whispered, into his visitor's ear:

"As surely as you value your life, stranger—friend or enemy, I know not in this hour which to call you—do not let such words again fall from your lips; not, I repeat, in the whole of this wide city. The evil be upon your own head if you do so."

The stranger waited patiently.

"It is sheer foolishness on your part," he began, placidly, when the servants had all retired to their own quarters, "making all this fuss about a simple episode in your daughter's history. The affair simply couldn't be helped—more's the pity, perhaps. But such is the history of thousands—you are, of course, aware of this fact; and, what is more—this for your own special comfort, too—only one in each of those thousands, if so many, ever shares the fate of your beautiful daughter and escapes."

Again the Jewish father winced visibly, as if stung to the quick—ay, and that most cruelly.

"For Heaven's sake, I implore you to be careful! Come now!" in an agonized tone; and, for the second time that night, the Jew glanced about him uneasily, right and left, as if to reassure himself of the fact that they had the room entirely to themselves.

He need not, however, have been afraid. The shadows cast by their own two forms were the only witnesses of the scene now in hand.

"You spoke with my daughter, then, on that occasion?" came presently, with an air of untold restraint. "You exchanged conversation?"

The stranger shook his head.

"You seem to understand little enough how matters are carried on in such an expedition as that of which we are speaking. The one running chain—you have forgotten, surely?—securing the wrists of each of the prisoners in line——"

"Oh, spare me!"

"Most certainly, if you wish it. To revert, then, to the original point. Little speaking—none, at any rate, that is needless—is permitted on the route. The gangs bound for Siberia, on foot for a great part of the way, pursue their road silently—tramp, tramp, tramp."

"Only if you *would* spare me!" came again, now piteously. "I know the tale by heart I tell you, then. Do you not hear?"

"Yes, yes. You wonder, perhaps, at the fact of my also knowing of your daughter's escape. The case again is clear enough. The news got wind, as folks say. I heard it—never mind where—and was interested. Do you understand? Your daughter's beauty had struck my fancy, and I remembered her, as I have already said."

How eagerly the Jew now watched his visitor; almost, it seemed, in hawk-like fashion, so fixed and penetrating was the glance.

"It is my turn to speak now," he began, slowly. "It is at least due to my sweet girl that I should give you explanation, though it burns my very lips to utter it. God help me! My child, though actually innocent herself of all intention to enter into any social, or, rather, political wrong, permitted herself, madly, to be associated with those who did so."

"I understand. Others have done the same, and suffered likewise."

The Jew bent his head an instant, then went on.

"The lover of my child was, however, one of the movers on the dangerous and also forbidden ground. My child was, in reality, only a passive and innocent looker-on. But touch pitch, and one must ever be defiled. Suspicion was at last aroused. My child was taken—not yet sixteen years of age; cursed by a legal tribunal to hard labor in the far-away Siberian mines—torn from the hearth and home which she loved best on earth. Say!"—and he broke off suddenly—"does not your heart ache, stranger, at such a recital?"

"I have known many such instances," came steadily, in answer. "They are all alike. One just like the other. And her lover?" came also steadily. "He was captured also? Serve him right, I say, for leading such a handsome girl into mischief."

The Jew's brow darkened now angrily.

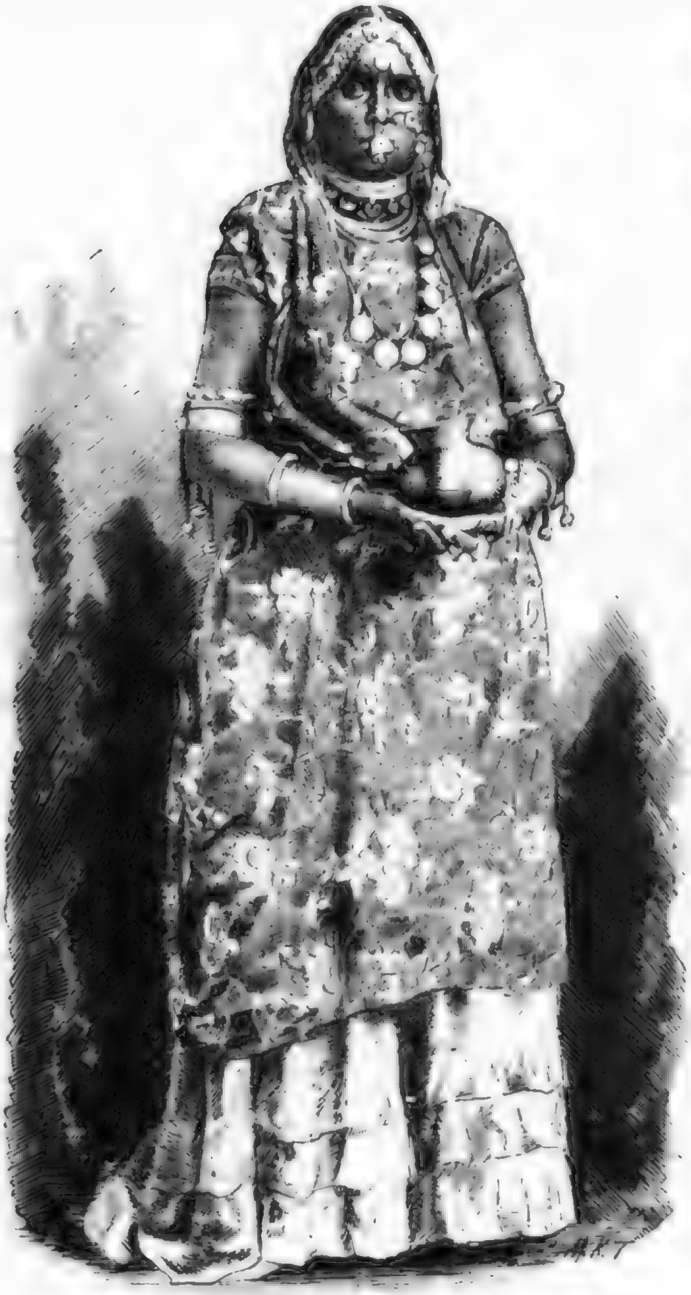
"My daughter's story is at least no warrant for this mode of address. The Jewess, no matter what her looks may be, is ever sacred amongst members of her own kith and kin. Heaven has willed it so."

"Forgive what was wholly unintentional on my part," came quickly. "I did not offend willfully. The man to whom she was engaged, then—his fate?"

"He escaped punishment by a mere quibble. The law—unjust as it more often is than not—pronounced him guiltless. But he was brave—brave as any man in this world could be—and craved to go also into exile, so that he might, as far as possible, share our sweet one's suffering. But no; the decision was final."

And then the Jew bent his head again, even as he had done upon the snow-clad moor, and crossed himself three times.

"Supposing I were to ask some special favor at your hands," observed the stranger, who had simply introduced himself as a member of the Kasansky family. "I



A HINDOO WOMAN IN TRINIDAD.—SEE PAGE 550.

wonder if you would grant it?" He spoke with a marked change of manner now; was speaking evidently of that which was fraught with real interest to himself.

"It is impossible to say. How can I divine your meaning?"

"True. My meaning, however, is simple enough. My true object, then, in intruding myself upon your presence to-night, is to ask your daughter's hand in marriage."

The Jew's astonishment could not be told in words.

"You hear me?"

"Ay."

"Your answer, then?"

"But I have told you—only a moment ago, it seems. My daughter is already a promised wife. Have you not understood?"

The stranger nodded carelessly.

"All right," he said. "I heard."

"And yet you ask this?" Michel Michelovitch was puzzled. And then a sudden thought struck him.

"Was their midnight visitor out of his mind?"

"Then you must have heard enough," came quietly. "It is needless, indeed, to pursue the subject. The statement of the case is conclusive."

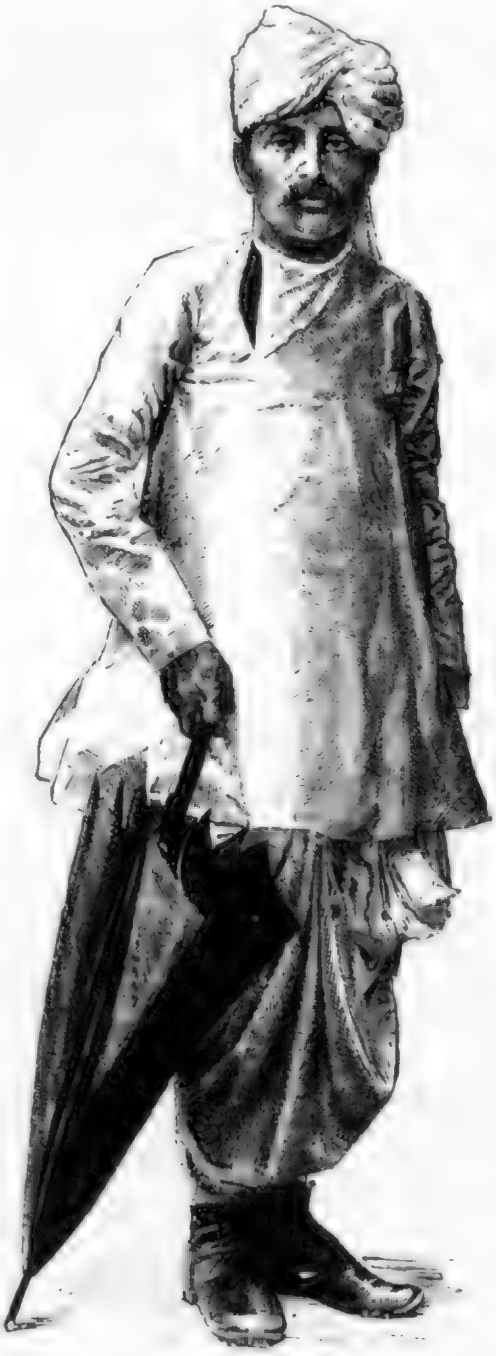
"Quite the reverse," came in answer. "To-morrow morning I will ask your daughter on my own account. Her answer, I have little doubt, will be all that I can wish. The game rests, I will be bound to say, in my own hands."

In another moment the Jew had turned fiercely upon his guest, but the latter had already moved toward the door, and was presently descending the staircase.

Chapter III.

"O God in heaven! you do not ask this in all reality?" urged the wholly panic-stricken voice of Miriam. "O God! again I ask, be merciful, and help me in this hour!"

"Yes, lovely daughter of the rich Jew, Michel Michelovitch, I ask you to become my wife? What, in the name of fortune, is there in such words to make you recoil thus?"—this, seeing that she shrank far away from him, as he went on. "I loved you—admired you, is, perhaps, the most correct way of putting things—even when I branded you. See!" And he advanced



A TRINIDAD HINDOO.

GOVERNOR'S HOUSE, PORT-OF-SPAIN, TRINIDAD.— SEE PAGE 550.

THE GARDEN OF GOVERNOR'S HOUSE, TRINIDAD.

XUM

as if to lift the sleeve a moment and expose to view the cruel, deeply burnt-in scar that had served to mark her "Convict!" in that northern settlement.

With the fury, however, of a wild-cat she had now sprung on one side, even from his very touch.

"I have implored your mercy—only spare me!" came piteously.

"Never!"

"Not for the sweet sake of all that you most value?"

"I value none but you. Have I not already told you that?"

"If it were death you offered——" she began, huskily.

"Listen, Miriam—for thus it is my pleasure to call you. Marry me, and, as my wife, you may be happy; the past also remaining a dead secret between ourselves. Refuse my suit, and you know at once the penalty. I am the man authorized by Government to recapture you, and take you back again, alive or dead—it matters not which—to your doubtless well-remembered Siberian quarters. You still remember them, perhaps?"

How dare he goad her on like this? But still he did so.

Too cruel, truly.

"Your answer, then? If you refuse, in two minutes' time you are again my prisoner, even as you were before in the branding-house. I shall not hesitate openly to denounce you to Government, and claim the reward offered for your apprehension. Decide. Results lie in your own hands. As I before said, I leave this city this morning—whether unaccompanied or the reverse remains to be seen."

* * *

And, then, five years have passed away, and it is Christmas Eve again within that grand old Russian city.

The bells are sounding as they sounded in the past; so full of joy that in the ears of many it is too terrible even to listen.

Each house is full of merriment and gayety.

The laughing children dance once more around the tree, and shout with glee and clap their hands, and grasp their gifts within their arms in sheer bewilderment at such a sweet tide of fortune.

Each house, it has been said?

Ah, no. Not quite. There are exceptions to the general rule—as when not?

The house occupied by Michel Micheloviteh is one of these. No lights shine through the windows, telling of brilliancy within. No Christmas-tree this year bestows its gifts in royal fashion.

No; times are changed:

"The lights burn dim,
The very walls are gray."

Michel Micheloviteh sits there alone, and prays that the days of Christmas-time may be forgotten.

Although a Jew, he has in the past, as has been seen, complied with the general social custom, and duly *fêted* the return of the season in question with tree and gift. He carefully, whilst so doing, excludes from his own mind even the semblance of religion. Why should he not, he considers? His own special tenets are, as a matter of course, wholly adverse to the same; but as an affair of social duty and pleasure, as has been said—why not? But to-night the case is different. He sits there alone, and thoughts are busy in his heart; thoughts that it were better far were absent.

His Miriam. Where is she now?

And then—the thought is terrible—she may be dead. God only knows. The bells ring on, now madly.

He cannot bear it longer, and rushes down into the open air.

"God help me! Am I here again! It is not possible!"

That voice! Oh, heavens, it is too terrible for thought! He knows it. But this is a frail, broken-down—nay, it might be supposed aged woman, that thus speaks. The voice alone is just the same. Time has not altered this.

A thin, worn arm was placed around his neck.

"Escaped again!" she whispered, hoarsely. "I vowed I would. The one year's suffering was nothing compared with that of the last five."

He took her in his trembling arms and held her fast and drew her in; then locked the door and bolted it, and sank upon his knees.

"Dear heart!" he whispered.

"Keep me!" came as if in agony. "My heart is broken. Only my will was strong."

He understood her.

"You vowed that you would be avenged. Let go your vengeance, then. The God of Israel has fought on our behalf, and won. My foe lies stiff beneath the northern sky—slain by my own hand, I tell you. Do you shun me? I had no other chance of freedom."

Her tale was ended.

The bells rang on, telling of holy peace and sweet forgiveness, and crying out for mercy to captives far away.

The moon shone down upon the snow around and stole upon the sweet, fair face of death.

Worn out!

A VISIT TO TRINIDAD.

By Florence Malcolm.

Though discovered by Columbus himself, and long held by Spain, then coveted by France, which captured and tried to settle it, Trinidad has never risen to any great importance in the busy stir of life, either as a centre of commerce or as a resort of those who seek luxurious ease.

This, perhaps, is due to the fact that Trinidad is an out-of-the-way island, not in the usual route of tourists, and the traveler who finds himself landed there soon recognizes the fact. Everything seems to be a century behind the rest of the world. Gas for illumination is something unknown, and even lamps are scarce; candles are in general use, even being used to light public buildings.

As the steamer enters the narrow channel between high cliffs, termed the Ape's Mouth, and skirts the low shores on the east and south, you come in full sight of Port-of-Spain, the capital of the Island.

You land amid gay groups that represent all quarters of the globe, Europe giving English, French and Spanish, Africa her negroes, Asia her Chinese coolies and her Hindoos. As you make your way to the hotel under breezy palms, you see Hindoos in loose white robes, the women in velvet sacques and white skirts, well bangled, but walking in serene state.

Port-of-Spain was built and settled mainly by Spaniards, as the name indicates, and as the peculiar style of the houses still plainly shows. The larger structures are all built round an open courtyard; they are of stone, in the centre of marvelously beautiful gardens, which are surrounded by stone walls. About a mile and a half outside of the City of Port-of-Spain are "The Savannahs," their Fifth Avenue, with the difference that there the display of wealth is in grounds and gardens instead of brownstone and marble. Garden parties are the rage, and each one tries to surpass his neighbor with beauty of flowers and foliage. It is a little above the town, nestled close to the mountain-side, which rises quite abruptly from there. We made an effort to secure quarters out there during our stay in the place, but the people looked at us as if we had proposed to commit some enormous sacrilege when we asked if there was a hotel or boarding-house in The Savannahs. That is something that no amount of money can succeed in procuring.

The Governor's residence is, of course, one of the best types of the fine style of dwelling to be found on the island. The city and its environs has charming walks and drives, like St. Ann's Road and the Almond Walk, and a visit to San Fernando well repays you for the trouble. But the great curiosity of the island is not its tropical vegetations or its lonely views, its Blue Basin or its Waterworks, but a strange natural formation, more curious than attractive.

Trinidad contains the greatest natural curiosity in the West Indies—a natural phenomenon such as exists nowhere else in the world. It is the Pitch Lake, which lies some forty miles south of Port-of-Spain, and is reached by a steamer, which lands you at the port of La Brea, a port itself surrounded by pitch. The very ship anchors in pitch; the passengers disembark on a pitch wharf; pitch lies heaped up far and wide in the harbor; in whatever direction the eyes turn they light on nothing but pitch; pitch, and the market price, is the one burden of conversation. A more wretched place to live in it would be difficult to imagine, and the few white people condemned to reside here, even for a short time, suffer much from ague; even the negroes failing to become acclimated to the baneful atmosphere of the place. The road from La Brea to the lake, about one and a half miles in length, crosses an utterly desert country, for, though once a forest, all timber has been cut down. At the first glance this sheet looks like any other woodland lake, nor does the traveler at once realize that it contains not water, but pitch. The borders are covered with tufts of grass and rushes, and its surface is studded with several wooded islands. The illusion is soon dispelled, however, by the color and consistency of the fluid. The surface is nearly everywhere strong enough to bear your weight, and looks as if just swept clean. It is broken by clefts and fissures—one might almost say valleys and abysses—where the pitch, evidently oozing up from various centres, has failed to unite into one compact mass. These fissures vary from a few inches to several yards in depth and extent, and when visited by the writer were full of water. In one of the larger pools an ugly-looking fish was seen, weighing about one pound, which, it was fancied, must be a warm-water creature, though how it could live in a fluid so saturated with sulphur and bituminous substances is, indeed, a mystery.

Crossing the clefts first on a negro's back, then on planks, we reached the opposite side to the edge of wood where are the "pitch volcanoes"—little hillocks, generally not much more than half a yard high, with air-opening in the centre about six inches in diameter. In these craters pitch is still in a fluid state, here and there welling up, often overflowing, but generally remaining more than half a yard below the surface. This condition is permanent, and no traces can be detected of greater activity on former occasions. Further on, the traveler came to oil-wells; petroleum, also, having been found in many places in this locality. The odor of these wells, however, necessitated a speedy return to the lake.

Here, a crowd of negroes were digging a deep hole in the centre, the pitch hitherto extracted, mainly from the surface, not having proved so suitable for preparation of gas as it was hoped might be the case with the masses lying at a lower depth, and so less exposed to the effects of air and water. They had brought a considerable quantity to the surface, looking very clear and pure, and so hard and brittle that it flew about like chips of flint at every stroke of the pickax. The foreman assured us that in about two days the whole space excavated would be again filling up. At one spot alone there were signs of a recent emergence of pitch on a large scale. Here the surface was too soft to be walked upon; being apparently about the consistence of treacle, and of a light-brown color. Slight explosions of gas were constantly taking place, followed by noxious vapors rising from the seething mass, and accompanied by little trickling streams of water and bright air-bubbles.

On the mountains are forests of cacao, feathery bamboo, and immense flowering forest trees, which become vast domes of brilliant colors. And they are so intertwined with parasites, that if one attempts to leave the roads, the way has to be cut through them. The ground is completely covered with ferns; two of the most curious (of both of which I gathered specimens) being the "gold" and "silver" ferns, the under side of whose leaves have the appearance of gold or silver.

There are any number of palm-trees from which the fans are made; or, rather, one might almost say, on which fans are growing. The leaves are much larger than the fans we use, but they are ragged all around the edges, so it is only the centre, down close around the branch, that is used. There are, too, plenty of the traveler's palm, which spreads like one immense fan from the very ground; its long leaves, which all branch off the central stalk, being beautifully graduated in size, in perfect fan shape. A tree, say twenty feet in height, could be placed between board partitions about a foot apart without their touching its leaves, which are hollow, cup-like, and always filled with cool water; hence its name of traveler's palm.

Here we see, in all stages of growth, the tropical fruits with which we Americans are so familiar. The cacao-trees, from which chocolate is made, are generally about the size of our orchard trees, or perhaps a little larger. The cacao itself is a reddish chocolate in color, containing a pulp, in which are the seeds used in the manufacture of chocolate. They are in size and shape very similar to our watermelon-seeds, though lighter in color, being a decided brown. They taste just like chocolate, and so easily is it prepared, that many families manufacture their own supply. When separated from the husks the seeds are dried, and the creoles prepare an excellent chocolate by pounding them, and working them up, with a little spice and other substances, in long rolls, which are carried about the street for sale. The chocolate made in Trinidad is the best I have ever tasted.

Oranges we have all seen, but not the varieties that Trinidad can boast, varying from the shaddock, or "forbidden fruit," as it is sometimes called, which is as large as a melon, to the sweet lime, which is smaller than a lemon. The outer coat, or skin, of the shaddock is extremely thick and bitterish in taste, more like a lemon. There are two species. The inside of one is like that of a lemon in appearance; that of the other, a beautiful pale red. The latter is the most delicate and delicious in flavor, and the most wholesome. But nothing that I have ever tasted in fruits of any kind can equal the little *sweet limes.* Imagine all the delicacy and sweetness of the best Florida orange you have ever tasted, intensified

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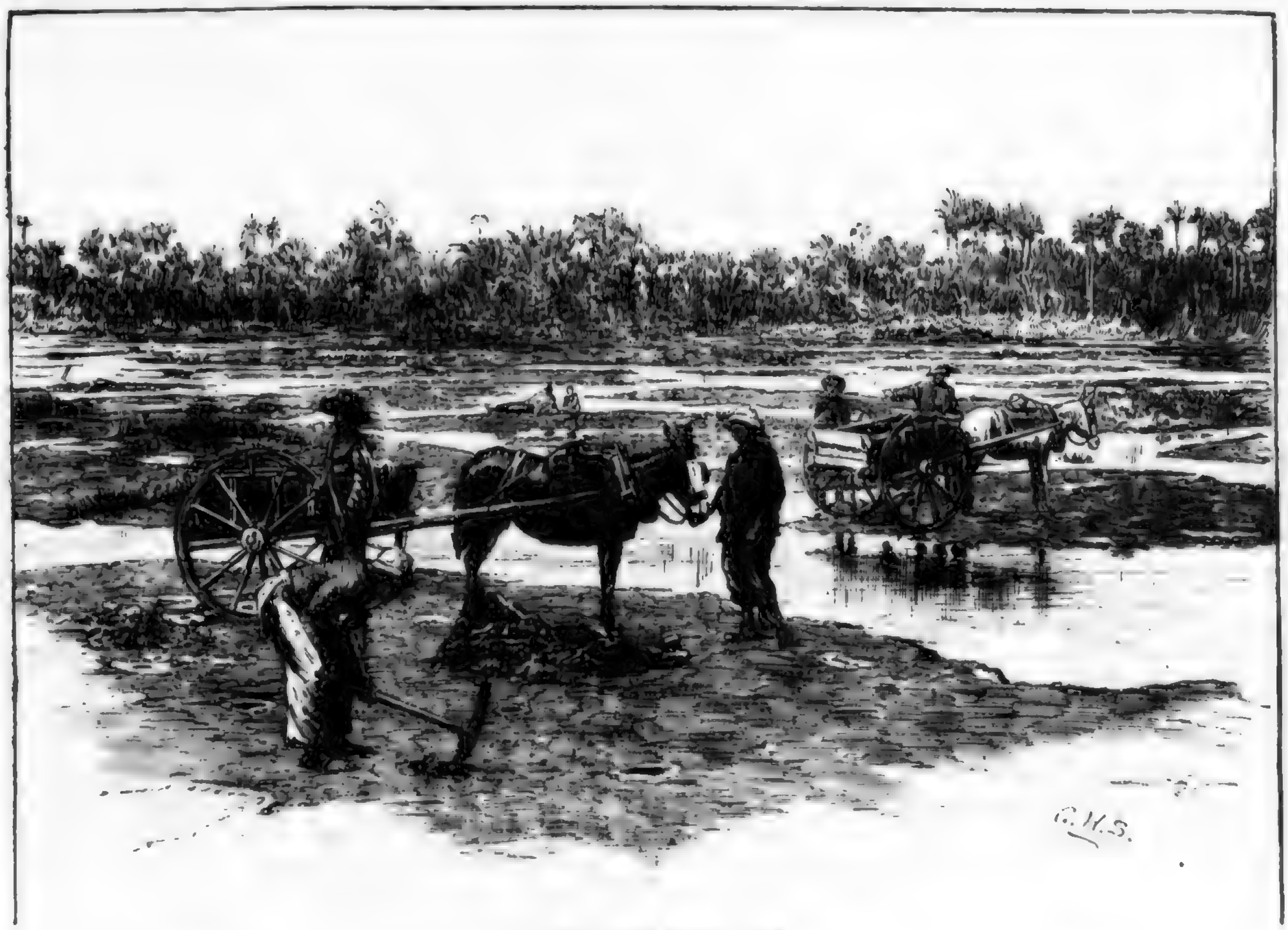
BLUE BASIN, TRINIDAD.

WATERWORKS, TRINIDAD.

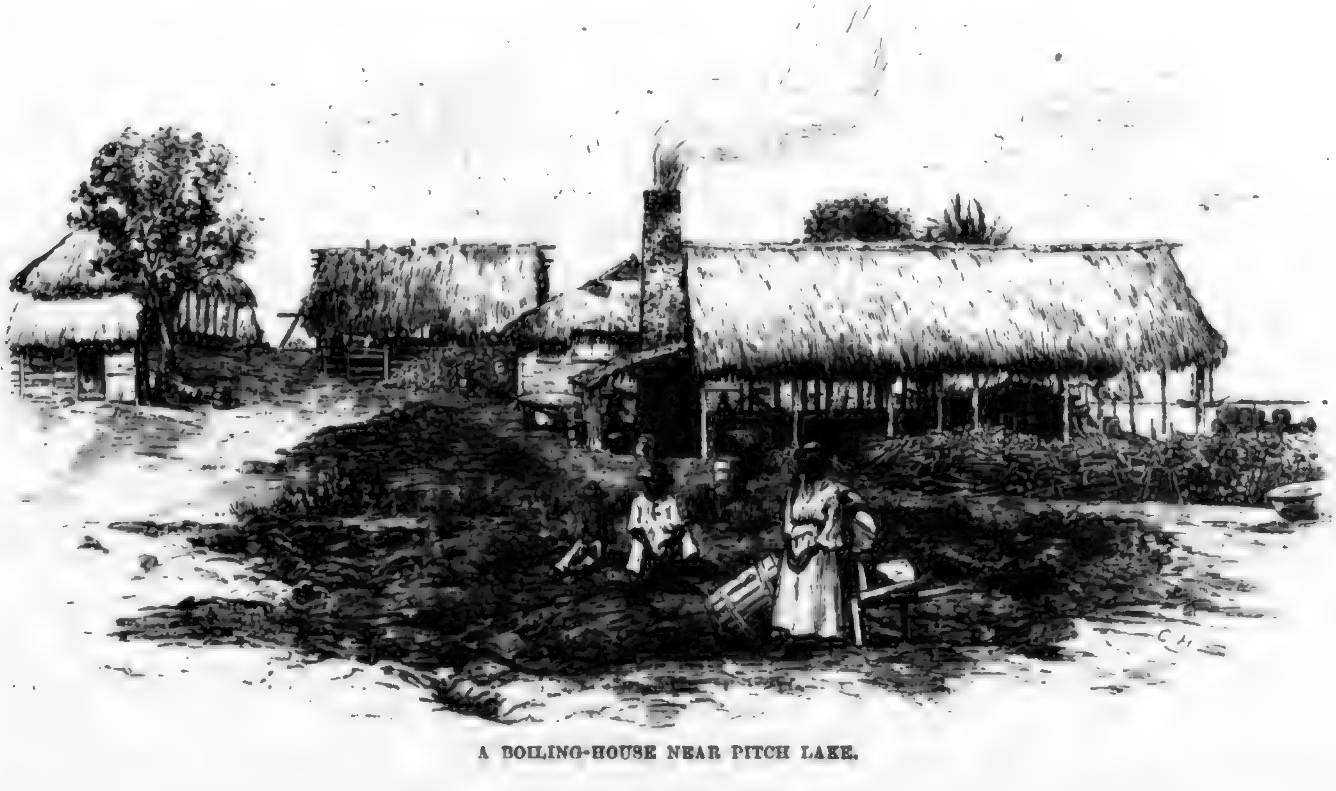


LA BREA, THE PITCH LAKE.

and compressed a dozen times, and then the improvement that necessarily follows from getting them ripened and fresh from the tree—but no, you can have no idea until you taste them.

The sugar-cane is a gigantic grass, growing from six to twelve feet high. The canes are planted nine or ten inches apart, but by the time they are six or eight months old, so many leaves have spread from each stock as to form a perfect jungle, it being utterly impossible to pass through. It has a large, feathery flower-head, often two feet long.

The breadfruit-tree is rather slender, 40 to 50 feet in height, often rising half as high without a single branch. The fruit is generally oval, or nearly spherical, about the size of a child's head. It is covered with a roughish rind, which is marked with small, square or lozenge-shaped divisions, each having a small elevation in the centre ; is at first green ; when imperfectly ripe, brown ;



A BOILING-HOUSE NEAR PITCH LAKE.

and when fully ripe, is a rich yellow. It is attached to the small branches of the tree by a short, thick stalk, and hangs either singly or in clusters of two or three together. It contains a fibrous pulp, which, when ripe, becomes juicy, but has then an unpleasant taste. At an earlier stage, when the fruit is gathered for use, the pulp is white and mealy, and of a consistence resembling new bread. It is cooked and served like mashed potatoes. It tastes half like potato and half like wheat bread, with a slight, sweetish flavor of its own. It is very nutritious, and agreeable in flavor.

The papaw grows to a height of twenty feet. Its stem is hollow, and supports a head, not of branches, but of large leaves, at the end of very long foot stalks. The fruit is of a dusky orange-yellow color, about the size and shape of a small melon, grows suspended upon the naked trunk, just below the leafy head. The leaves and fruit of the tree, till ripe, abound in an acrid, milky juice. The fruit, when ripe, is eaten with pepper and sugar. Meat is made tender by being rubbed with the milk of the unripe fruit. It grows spontaneously, and begins to bear fruit within ten months, never ceasing when it has once begun ; ripe and green fruit and blossoms being seen on the tree at the same time.

The sapadillo is a kind of pear, the skin and inside of which are both russet in color. It is very sweet, more so than any of our fruits, and is luscious.

Each banana-plant produces but one bunch of fruit, which is ripe in about ten months after the sucker has been planted. When that is cut, two come up in its place, taking less time to mature. A cluster of bananas often contains from one hundred and sixty to one hundred and eighty fruits, weighing from seventy to eighty pounds.

I have spoken of the cabbage-trees ; cotton, too, grows on trees there, not small ones either, but immense forest trees, like our elms and oaks, though, I believe, the cotton is coarse and of inferior quality.

But a sight worth a journey is to see oysters growing on trees, and this is a reality, for I frequently saw small ones on the mangrove-tree. This tree is of singular structure, for it shoots out fresh roots, or, rather, supports, as it grows ; when the tree is at its full age, it may be found raised six or eight feet from the ground, to which the supports gradually tend in regular succession. These legs, if we may call them so, seldom attain more than a foot in diameter, and fifteen or twenty feet in height. As the mangrove grows in wet places, these supports catch the oyster-spawn, and the shellfish grow on the trees. They are obtained chiefly by Chinamen, who go through the streets with them in a kind of bucket on either end of a pole, carried across the shoulders.

Trinidad is the only place where we saw the wonderful fireflies, of which we had all heard so much. They are dark-brown in color, about an inch to an inch and a half in length, something of a beetle shape. From their peculiar construction, they are excellent leapers, bending their bodies in half, and, with loud clicking noise, spring up to a considerable height. They have three lights ; two lights in the head (one on either side), which are greenish-white, like phosphorus, and are always visible at night ; the third is under the abdomen and wings, and is a reddish-yellow light—a perfect flame color. The latter appears to be set in their bodies, and they cover or open and show it at will. The light in the body is at least three times as large as the others, and of such intensity, that you can easily read by the light from one bug. They are very destructive to sugar-cane, living mainly upon it, though they bury themselves in decayed wood while the daylight lasts, to which they seem to have a great antipathy. The light cannot be seen in the daytime, and the lights in their heads look like little yellow spots, unless you disturb them, when they will flash their lights, which fade away at once. I brought eleven away with me, and they lived about two months. I made great pets of them. They are very active, swim like fish, besides flying and jumping. They had a swim every evening, and then I let them fly about in the room. After my return to New York my bugs became quite famous, people coming from far and near to see them. I brought back a quantity of sugar-cane for them, and kept them in the daytime in a dark closet in a box containing earth, decayed wood, sugar-cane, and very young fresh green leaves. Down in the West Indies the ladies wear them a great deal in their hair, or incased in gauze as a necklace, when going to balls, parties or the theatre, the effect being extremely brilliant.

YESTER-YEAR.

Had I but heard
When yester-year dear Love came near,
And cried and called to me in vain,
And sang sweet songs I would not hear,
Still pleading on—again—again!
Had I but heard! had I but heard

Had I but seen
Love standing by with longing eyes,
And outstretched hands held forth to me!
The joyous face I would not see
Turned slowly back regretfully -
Had I but seen! had I but seen!

Had I but felt
That Love was knocking at my heart!
I could not feel—my heart was stone—
And beats to-day to feel that now
My heart and I are all alone.
Had I but felt! had I but felt!

Had I but known
That I should crave with mad regret
For that dear love of yester-year,
Grown sad with longing to forget,
Through yearning days and nights of tears!
Had I but known! had I but known!

THE EVIL EYE.

By Elizabeth Phipps Train.

It is not often that women have strange adventures and thrilling experiences. It is the sterner sex, whose sphere of action is more enlarged, whose business relations and professional careers bring them in more direct contact with the darker side of life, who are generally the heroes or victims in the dark dramas or tragedies to which our attention is often attracted in the daily papers, and which call from our incredulous notice a careless expression of semi-doubt and horror. It is true that the Frenchman's belief in woman as the *motif* for every crime under the sun has passed into a proverb, but her share is more often that of the passive cause than of the active participator.

In my case I could unquestionably lay claim to the unenviable distinction of being the suffering heroine and victim of a most remarkable episode, whose hero was as surely and innocently done to death by me as if I had plunged a knife into his foul heart. Let me run over in my mind the events of the past four or five years, that I may be quite correct as to dates, and thus vindicate my sex from the charge of inaccuracy which is so often brought against it.

The Summers of '84 and '85 I spent at the mountains—that of '83 I passed at Newport, and the two previous years I was traveling in Europe for the purpose of restoring my nervous system to its usual balance after the event which I am about to describe, so that I may be quite positive in asserting that it was in the Summer of '80 that my brother-in-law, Roger Boardman, who was an ardent yachtsman, invited me to make one of a party to spend three or four weeks on his beautiful *Vagelia*, a schooner-yacht of some one hundred and twenty tons. We were to leave Boston July 7th, and run eastward as far as inclination prompted. My sister and I had, in previous years, proved ourselves good sailors, and with her husband and his friend, Dr. Frederick Lawrence, we formed a *partie carrée*—a sufficient number for comfort and pleasure.

The *Vagelia* was in charge of an excellent sailing-master, and the steward was equally trustworthy in his department. We went on board in time for dinner, intending to start out at daybreak on the following morning. To each of us was assigned a stateroom, whose necessarily small dimensions obliged us to leave our doors open at night in order to obtain a freer circulation of air. Those of my sister and self were on one side—hers being forward of mine—while the gentlemen occupied two on the port side of the yacht.

The first evening we spent in a somewhat desultory chat, mentally shaking ourselves into place, as the doctor, an old college chum of Roger's, having been abroad for three years, was somewhat of a stranger to us all, and to me an entirely new acquaintance. He had traveled widely and with open eyes, and, in the process of hair-brushing, Alice and I congratulated ourselves upon the delightful acquisition which he promised to make to our party. The night passed quietly, but we were awakened early by the bustle and clatter incident to getting under way, and after vain attempts to catch another nap, I rose, dressed myself and went on deck to find Roger and the doctor already there, watching the swabbing of the decks, polishing of brass and various matutinal exercises which have rendered the word "shipshape" a synonym with perfect order and neatness. The decks were wet and gleaming under the first rays of the morning sun; the anchor was weighed, the sails hoisted, and under a fair spread of canvas we were beating down the harbor with a light nor'east breeze. A camp-chair was placed for me on a comparatively dry spot, and with the doctor sharing my enjoyment, I watched the busy sailors in their various occupations.

There were nine men in the crew, irrespective of the sailing-master, cook, steward and cabin-boy, men of all types and nationalities, and we amused ourselves by trying to class them and analyze their characters. We found it a difficult, and, in many cases, unsuccessful task, as proved by the captain, who served as key to the enigma. Cosmopolitism in the nineteenth century is so widespread that it is no easy matter to recognize any distinguishing traits save those the Jews, of all other nations, alone retain. Here, for instance, is a man of dark olive complexion, curly black hair and soft brown eyes, which, we both decide, could never have acquired their tender, melancholy expression under any but ill-fated Italy's skies, and lo! our referee tells us he is an American of Yankee parentage, and probably knows no more of the seven-hilled city than does yonder blue-eyed, flaxen-haired Irishman know of the Teutonic birthplace to which we had assigned him.

Suddenly I start, and involuntarily clutch the doctor's arm, which is resting against the bulwarks, while a strange, inexplicable shiver—a mixture of dread, foreboding and terror—thrills through me. I cannot account for my alarm—that is, satisfactorily. I know what has caused it; but how can I disclose to this strong, somewhat cynical stranger, the fact that the glance of a pair of deep-set eyes, in the face of a common sailor whom I had never seen before, should create in me such a spasm of nervous shrinking! He did not notice my touch, or, if so, attributed it to accident, for, without alluding to it, he took up the broken thread of our discussion by remarking:

"Look, Miss Brainerd! There's a queer, uncouth specimen—of what nationality is that misshapen hulk?"

I followed the direction of his eyes, and found that he, too, was looking at my man. Let the words stand. He *was* my man; at least, judging by after events, my claim on him was as good as any of which he was the object. He was kneeling in front of the binnacle, which he was polishing with a handful of cotton-waste; his tall, huge frame was broad almost to deformity; and on his immense, square shoulders, massive enough for an Atlas, was poised, on a thick, short neck, a head covered with a mass of rather long, curly red hair. The coarse, burned skin of the face was adorned by a crop of sun-bleached whiskers, extending down each cheek and meeting under the chin, leaving it and the mouth exposed to view. The lips were thick and coarse, the nether one being slightly drawn to one side, in such a manner as to produce the effect of a leer. But it was to the eyes particularly that the face owed its repulsiveness and horror. Ah, those eyes! I can close my own even now, and see, as vividly as on that first occasion of my beholding them, their evil, sinister stare. The lids were half closed, imparting a surly, lowering expression to the brow; and beneath the short lashes the cat-like, green iris and contracted pupil shot forth a penetrating, creepy gaze which seemed always fixed upon the person who regarded him. Had the eyes been of the most agreeable description, the very pertinacity of their observation would have been annoying and unpleasant, but, being what they were, a sort of horror seized me whenever I chanced to look in his direction. Should I live to be a hundred years old; should my faculties one by one leave me, yet am I convinced that, even then, I shall preserve fresh and clear the memory of that baleful gaze. So fascinated was I with the uncanny influence which had so affected me, that I paid no heed to the doctor's question; but, surprised at my sudden silence, he turned to repeat it, and, struck by my appearance, substituted another in its place.

"Why, Miss Brainerd, what is the matter? You're as pale as a ghost. You are not ill?"

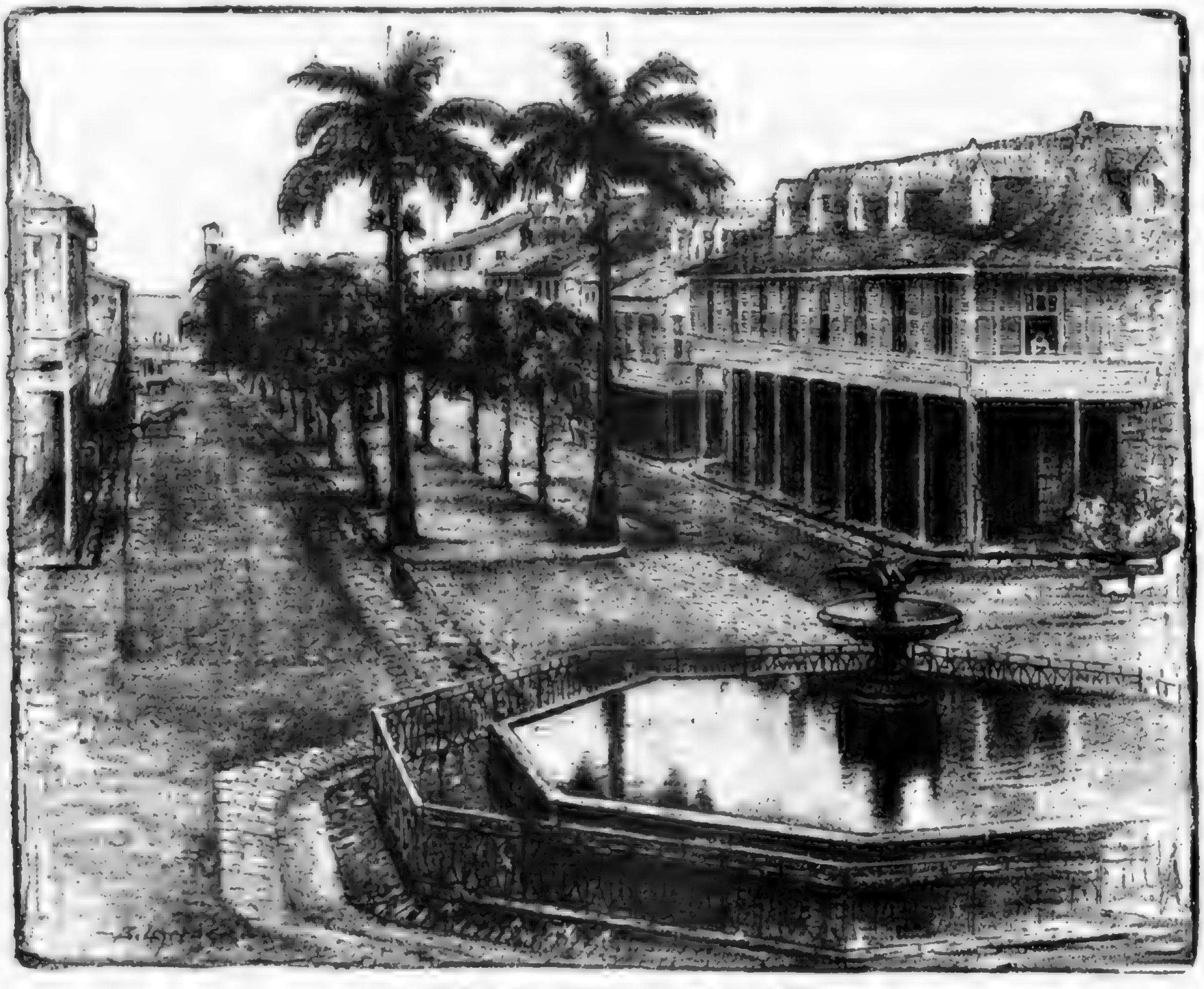
"No," I replied, somewhat shamefacedly, hesitating whether or no to explain what he would probably consider an absurd cause for the agitation which had driven every drop of blood to my heart. "No, I am not ill, but"—here I burst into a nervous, almost hysterical, laugh—"help me to rise and move with me a little forward, and I'll explain my ghastly appearance."

He rendered me the assistance I really required, and, as we stopped at some distance from the stern, I said:

"Promise not to laugh at my folly, but there is something in that sailor's glance which quite unnerved me. Where did he come from, and why did Roger ever engage such an ill-looking creature? He realizes all I ever imagined of the *jettatrice*, and I am sure that my instinctive shrinking was a warning to me that, in some way, my life will be affected by him. Ah, I knew you would laugh"—seeing a smile stealing over his face—"but I tell you that a woman's organization is a susceptible affair, and contains finer and more sensitive keys than that of a man. I am no psychologist, but mark me, there is more in instinct than rationalists grant, and I believe that no person can become so sensibly affected by the mere glance of an unknown stranger without some hidden reason."

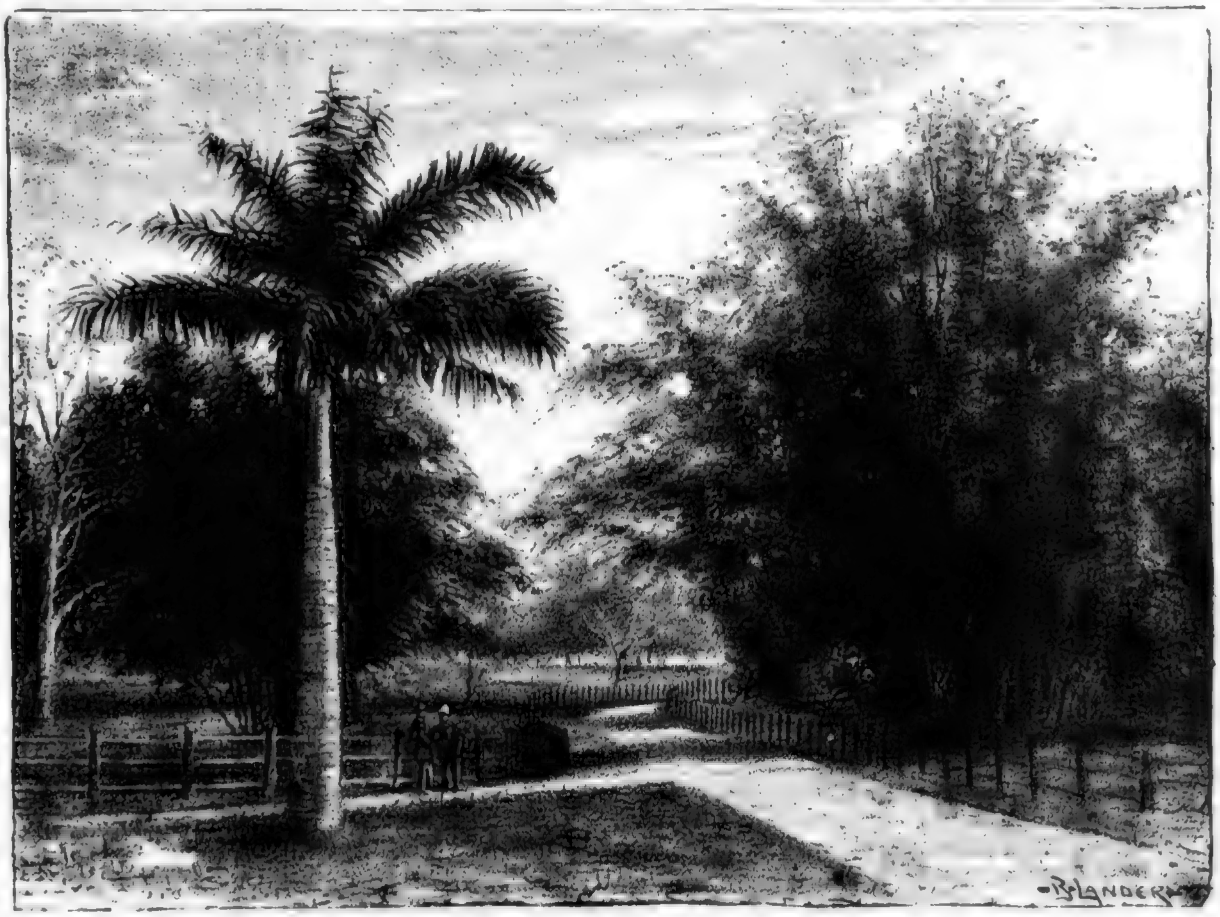
The doctor smiled goodnaturedly, and shrugged his shoulders with the tolerant gesture with which one meets the unreasonable arguments of a child, and turned the conversation into other channels, undoubtedly believing that the only method of dealing with my vagary. I did not recover my usual poise all day. Every time I chanced to glance toward the bows my eyes encountered those others, and each time I shivered as though an icy hand were laid upon me. Twice Roger noticed my tremor, and was urgent in his offers of shawls, ulsters, etc., though at the same time expressing his wonder that I should need anything in addition to my heavy serge dress. I would not explain to him or to my sister the real reason why, at intervals during that hot July day, I felt a cold chill creep over me from head to foot, because, after the doctor's reception of my explanation, I knew that Roger would ridicule me also; and as to Alice, she was of even a more nervous and susceptible temperament than I, and I did not wish to create a like uneasiness in her. However, I resolved at the first opportunity to interrogate the captain regarding the man, and try if there were any means of obtaining his discharge from the yacht. My opportunities during the day for private conversation with Captain Jameson were very few. The weather was so beautiful that we were all tempted to remain on deck, and so my endeavors were thwarted. Neither was I more fortunate the following day, but my annoyance was rendered much less by the kindly efforts of Dr. Lawrence, who, seeing the really wretched effect that the man's fixed gaze had upon me, considerately and unobtrusively interposed the ægis of his person between me and the *mal occhio*.

The morning of the 10th dawned cloudy and with a drizzling rain, which kept us prisoners in the cabin the greater part of the day. As I awoke and heard the soft patter of the rain, my first thought was that it would afford the opportunity for the secret conference which was becoming my chief object in life.



ST. ANN'S ROAD, TRINIDAD.— SEE PAGE 550.

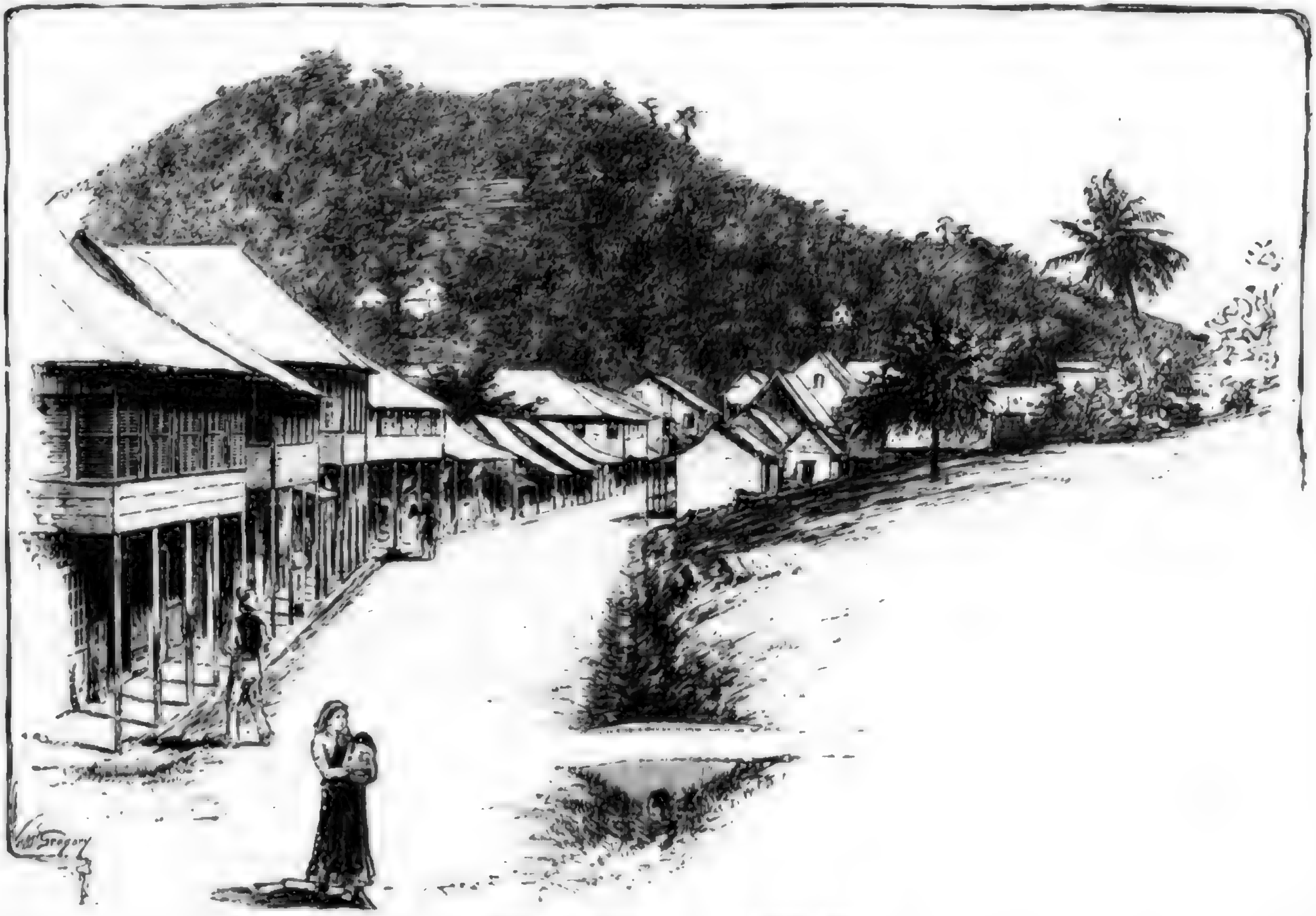
Never did lover more zealously plan a rendezvous, than I an unobserved conversation with the sailing-master of my brother's yacht. My morning efforts were dismal failures, and I was growing heartsick and discouraged, when, after lunch, the gentlemen announced their intention of overcoming the *ennui* consequent upon confinement in the cabin by a trip ashore. With joy I saw the gig lowered, and joined heartily in the Godspeed which Alice waved them from the stern, and warmly I encouraged her determination to avail herself of their absence to gain a little sleep in the cabin. Now was my chance. Wrapping my thick ulster about me, after seeing Alice comfortably bestowed on one of the broad transoms, I stole on deck and entered into a careless conversation with Captain Jameson, who was pacing up and down the fore part of the yacht, puffing away at a short, black "T. D," which had apparently seen good service. With a good-natured sacrifice of his own enjoyment, probably thinking me desirous of relieving the tedium of a rainy day, he shook out the smoking con-



A VISIT TO TRINIDAD.—THE ALMOND WALK.—SEE PAGE 550.

tents of his pipe, stowed it away in his pocket, and came aft to answer the multifarious questions with which, as prefatory remarks, I plied him. After listening to many, and what at another time would have been extremely interesting, relations of his varied experiences, with what patience I could command, I introduced the *Vagelia* as a subject of conversation, and drew from him what he knew regarding the man whose presence on the yacht bade fair to destroy my pleasure.

He was a Russian Finn, Captain Jameson said, his



A VISIT TO TRINIDAD.—SAN FERNANDO.

name, John Johnson, being a translation, I imagined, of Ivan Ivanowitch, and of his previous history he knew but little. He had been hurriedly engaged, just before starting, in order to fill a vacancy caused by the sudden illness of one of the crew: was an excellent seaman; thus far had been perfectly quiet, willing and tractable, anxious to serve, quick and exceedingly handy about his duties and respectful in his demeanor; altogether so satisfactory and desirable a man that I could find no possible hook or crook whereon to hang a request for his dismissal, and miserable and abashed at my total failure, I went below to write letters, finding, in my disappointment, some difficulty in concentrating my attention on my epistolary efforts. At four o'clock the rain ceased, and a magnificent sunset gave promise of a fine morrow.

The two or three succeeding days passed pleasantly enough for the rest of the party in the enjoyment of the beautiful and picturesque scenery of the eastern coast, but I, restless and uncomfortable, was really becoming morbid and miserable from a cause which was unknown to any one but Dr. Lawrence, whose strong, unimpressionable phlegmatism never associated my nervous uneasiness, lack of appetite and loss of sleep with what he had laughed at as a passing feminine whim, and who attributed my ill looks and obvious depression to a far more tangible evil, *mal-de-mer*, and insisted upon offering me various nostrums, until I felt an overpowering desire that he should fall a victim to his own remedies.

One day—it was Sunday, I believe—as we lay at anchor in a pretty little seaport, Alice proposed that we should doff our yachting garb, and donning apparel more suitable to the day and occasion, make a visit of investigation to the lovely town whose exquisite situation we had so admired. Accordingly I put on a white gown of simple texture, but well-fitting and becomingly fashioned, and, instead of the jaunty, rather rakish turban which had served thus far as headgear, covered my "golden fleece," as Roger called my tawny, untidy locks, with a broad-brimmed Gainsborough, whose mass of white ostrich tips rendered it peculiarly unsuitable for the water; and decking my person with some of the trinkets which, during the reign of my severe tailor-made serge had lain neglected in my stateroom, I mounted the companion-way and joined the others, with a little flutter of consciousness in my own fairness, and with a feeling of gratified vanity at the thought that Dr. Fred, as we jokingly called him, should have this opportunity of seeing what a creditable appearance I could make. The day was lovely, and the fair little town which we were about to visit looked so peaceful and smiling under the sunny sky, there was such an air of serenity over everything,' together with the prospect of escaping, even for a while, from that haunting gaze, that I felt as though a burden had been lifted from my shoulders, and met the doctor's repartee, for once, in the same spirit and with brilliant success. Alice looked sweet and charming in her soft, dove-like gray, and the men, both good-looking fellows, were equally improved by a little closer attention to appearance than they usually bestowed in our free and easy, unconventional, lazy life 'board ship. The gig was already lowered, and Alice had stepped into it. I was about following, with my head turned in the direction of the doctor, upon whom I was impressing certain strong injunctions as to the care of my parasol, for whose safety in his grasp I was apprehensive, when, as I was about stepping on the gangway, I turned my eyes to guide my steps, and saw, sitting in the boat with uplifted oar, the man, escape from whose surveillance had been my chief motive in going ashore. There he sat, in an attitude of attention, on the thwart nearest the stern, and, though the doctor may sneer at the weakness of women's nerves, I think that my involuntary pressure of his hand, which I had taken to steady myself in the descent, quite convinced him that the *grasp* of our sex can, at least on occasions, be quite as powerful as that of a man; while over me again, from head to foot, stole that long, cold shiver which seemed to presage the chill of death. However, I gained sufficient self-mastery to enable me to take my seat in the little boat, though I nearly shrieked aloud when I found it brought me into close proximity with the object of my horror.

Soon we were gliding, under the powerful strokes of the men, swiftly over the water, and I sat dumb and spellbound, while the doctor, who had received a signal intimation of my disturbance, recalling the previous occasion on which he had seen me thus affected, kindly did all in his power to distract my attention by introducing gay and frivolous topics of conversation. At last, his zeal having suffered many rebuffs from my persistent and unconquerable silence, he, man-like, believing that in admiring a personal adornment he should find my vulnerable point, said:

"Pardon me, Miss Brainerd, but what an exceedingly unique and beautiful chatelaine you wear. Is it quite wise, do you think, to so carelessly expose so valuable a trinket to public cupidity?"

As he spoke, the Russian, whose every movement I noted, lowered, for a moment, that basilisk glance to fasten it upon the dainty watch which hung suspended from a curiously wrought chain at my waist, and as his eyes fell upon it, a dull-gray color spread over his face from brow to chin, his ugly, distorted lips quivered as under the influence of some overpowering emotion, he lost his firm grasp upon his oar, which, in its retrograde motion, struck the water in a manner commonly called "catching a crab," throwing him backward in such a sudden fashion that he would have quite fallen, had he not grasped and saved himself by a fold of my dress.

The mishap was a startling and, to all save myself, a ludicrous one, and, as the man regained his equilibrium, Roger good-humoredly chaffed him regarding his clumsiness; but as I watched the ugly flush which dyed the man's face, and observed the stealthy glances which he cast at my bauble, the absurdity of the *contretemps* was quite lost in the agony of apprehension and loathing which possessed me. I could not understand, nor did I believe, that the trinket was in any way connected with his sudden loss of self-control, but I felt, all of a sudden, an impulse to tell the history of my watch, and observe its effect upon him. Detaching the costly trinket from my belt, I handed it to Dr. Lawrence that he might better examine its quaint design and beautiful workmanship; and, as I did so, those dreadful eyes followed the movements of my hands, and for the first time since leaving home I looked at him without encountering his glance. It was transferred to the glittering article which the doctor now held in his hand, and was a strange concentration of fear, wonder, recognition and covetousness, though so stealthy was its vailed scrutiny, so narrow was the line betwixt the upper and the lower lids, that no one, save myself, a peculiarly intent observer, noticed the earnest inspection.

The ornament was a beautiful little affair, and I was vain of it, pardonably so, as I think any one who had seen it would admit. Both chatelaine and watch were of jade, the former wonderfully carved into the semblance of a serpent, from whose jaws dangled the round, green ball in which were set the tiny and not very accurate works of a watch. The rare and difficult carving of the stone made it of considerable intrinsic value, which was enhanced by a couple of rubies, of good size, which formed the serpent's eyes. Of course, so odd and singular an ornament attracted much notice, and I had not only been often and enviously congratulated upon its possession, but offers, quadrupling the price I paid for it, had been vainly made to tempt me to part with my curious toy.

The doctor, whose artistic and cultured appreciation of objects of virtu rendered him quite a connoisseur, became very enthusiastic over the exquisite and wonderful engraving of the flint-like stone, and begged me to relate its history.

"I can only partially satisfy your curiosity," I said, while, with a sudden accession of boldness I looked, not at him whom I addressed, but at the sailor, whose eyes, at my first words, wandered back from the watch to my face, and whose intense and eager interest seemed to absorb all his faculties, leaving to his duties as oarsman only the stiff and mechanical action of an automaton. "To whom the trinket originally belonged I cannot say, but I became its owner under the following circumstances: Two years ago I went abroad for a few months with some friends whose uncle was our Minister to Russia. Having done the regulation tour of France, Germany, Italy and Switzerland, in accordance with their wishes we extended our travels to St. Petersburg. Just after we reached the 'Czar's Window,' as the city is called, our maid fell ill and died, leaving us quite forlorn, not knowing where to procure another to fill her place. We bewailed the loss of the poor creature to the various female acquaintances to whom Mr. G——, our Minister and host, introduced us, and finally were fortunate enough to interest a kind-hearted and benevolent Sclav in our woes, who, to our great delight, proposed, as an amelioration to our condition, the services of a Russian maid, whom, however, we must accept without a reference, as her former mistress, a foreigner, had died recently at an hotel in St. Petersburg, leaving this woman, a stranger from a distant part of the country, without money or friends. Rendered quite desperate in our need, we engaged the woman, whose chief recommendation lay in her ability to speak English. On the following day she appeared, and we were much struck by her appearance."

Here the man, whose attention was becoming almost painful in its intensity, quite forgot his position as stroke-oar, and his machine-like regularity of motion quite ceased, until the fellow behind him gave him a by no means gentle reminder with his foot, when the stiff, automatic motions were renewed.

"She was a woman, or, rather, splendidly developed girl, of perhaps nineteen years, with one of the handsomest faces I ever saw. Her features were splendidly regular; her eyes, large and dark, at times soft and melancholy, but under excitement hard and glittering with a repulsively brilliant light; her dusky hair waved luxuriantly back from a low, broad forehead, which bore the only blemish on a beauty which, without it, would have been marvelous. Across the brow, from temple to temple, ran an ugly crimson scar, which was traversed midway by a similar perpendicular line, the two forming a most singular disfigurement in the form of a perfect cross."

"Scarcely had I uttered the last words when a groan, almost a cry, startled all the occupants of the gig, who had been interested auditors of my tale. So sudden and quickly repressed was it, that but for me, perhaps, no one there would have discovered its origin. Really fascinated now by the strange effect of my story, and determined to make an effort to probe the mystery, I leaned forward and addressed the man from whom the spasmodic utterance had proceeded, and who now, with lowered head, was giving all his attention to the long, regular sweep of his oar.

"Are you ill, John?" I asked, with newly acquired boldness. "Was it pain that caused you to utter that groan just now?"

He shook his head sullenly, then suddenly raised it and shot a menacing glance at me from under his half-closed lids, while he nodded his head, quickly muttering, in broken English:

"Pain—'es—sick here—awful!" laying his hand for a moment on his left side, with a horrible contortion of the face to express suffering. Alice murmured a few words of sympathy, but I, feeling that the groan was not called forth by any physical suffering, went on with my story:

"Frederika proved all that could be desired as a maid, and seemed to become really attached to me. I longed to ask her the origin of the dreadful blot on her beauty, but there was a certain dignity and reserve about her which prevented my satisfying my curiosity. One day, I was quite alone, and was quietly reading in my room, when Frederika, after a soft tap at the door, entered, bearing a small, red leather case in her hand. She came forward and held this toward me, saying, in her soft, modulated tones, with a rich accent:

"'Mademoiselle will pardon me; I have are quest to make?' I nodded assent, and she continued: 'Will mademoiselle examine this which I bring with me?' placing in my hands the case, which I opened, finding within the watch and chatelaine which you hold.

"I expressed my admiration in warm tones, and, with tears filling her beautiful eyes, the girl begged me to buy it, naming as a purchase sum the amount of rubles equal to about fifty American dollars, and pathetically entreating me thus to enable her to return to her home in the vicinity of Riga. The girl's nostalgia was so evident, and her words and tones so, winning that even without the covetous desire I felt for its possession I should have felt strongly tempted to buy the ornament. I questioned her as to the manner in which she had become its owner; and she told me so straightforward a tale, as to its having been a love-token from a former sweetheart, that, perhaps not caring very much to investigate the matter, I took the case and its contents, and, unconscious of its real value, gave her the sum she wished. Since learning the greater worth of the chatelaine, whose cutting makes it extremely valuable, I have no doubt that, even if the girl were honest in her method of acquiring it, the sweetheart had obtained it in a less creditable manner."

As I finished, the man, whose head was dropped forward on his breast, shot another scowling, malignant glance at me, under whose influence my short-lived courage oozed out at my finger-tips, and, as the gig drew up alongside the wharf at which we were to land, I drew a sigh of relief at the prospect of a short escape from my *bête-noir*.

Two or three days later we were sitting on deck in the early morning. The men were, some of them, aft, polishing the brasswork, and the conversation had fallen upon insomnia, from which, probably owing to the morbid state of my nerves, I had suffered severely since coming aboard; in fact, the first night being the only one in which I had enjoyed complete, unbroken rest. I was complaining of this, and jokingly asked the doctor if he had no anæsthetic with him.

"No," he said; "the only thing of that nature I have with me is a small bottle of morphine and a hypodermic syringe. These I always carry in case of accident."

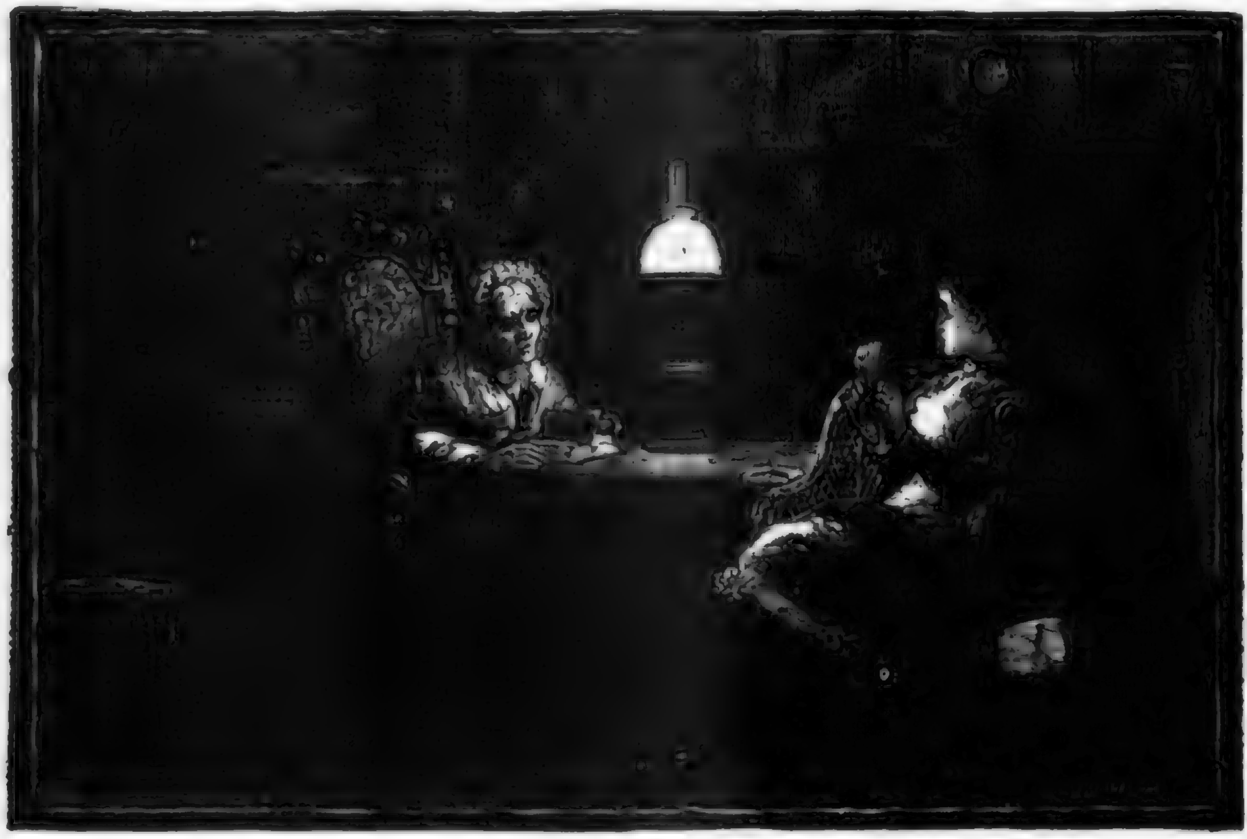
"Why can't you give me a little to-night?" I asked. "Does it hurt? And how do you administer it?"

He replied by giving a careful and elaborate description of the method; so circumstantial, indeed, that when he finished, I said, triumphantly:

"Many thanks. I need not trouble you now, should I desire to aid Nature in summoning sleep. By-the-way, where do you keep this precious apparatus?"

"I believe that it now reposes in the breast-pocket of my overcoat; and that reminds me that the next time I go below I must put it in my stateroom. If you want to use it," laughingly, "you'll have to ask for it."

That night I had fallen into a light doze, and was lying, as is my custom, with both hands clasped above my head, when I felt a little scratch on my arm. Thinking that I had, as sometimes happens, left the point of a pin exposed in one of my crimpers, I drowsily moved my head a trifle in order to avoid a repetition, and fell into a sound sleep, from which I did not wake until morning, when, on rising, I found that I was the prey of a racking headache. Dr. Fred, commiserating my sufferings, and believing that my wretched nerves were the cause, mixed me a composing draught and recommended perfect quiet. While I lay revolving my miserable condition in my mind, I tried to convince myself that the only remedy for my morbid, unhealthy state lay in flight; that I must go to Roger, state the case to him, and express my determination of leaving the yacht. It was a difficult decision to make, as there were certain reasons, which I scarcely dared to confess to myself, which made the unconventional freedom of yachting very pleasant and attractive to me just now; still, if this wearing, sleep-destroying, haunting horror continued much longer, I felt that I should become a fit inmate for a madhouse.

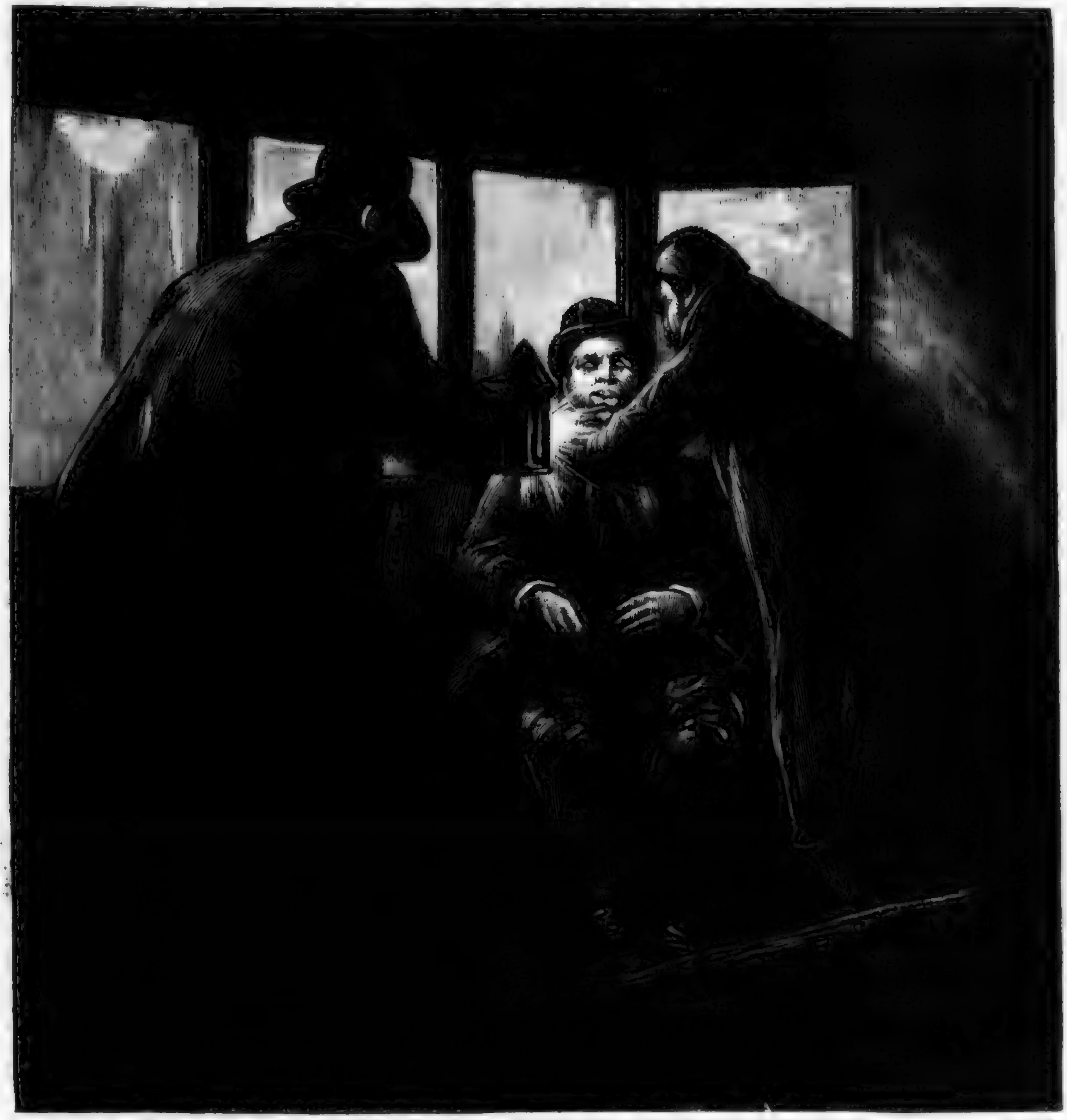


A QUIET EVENING.

Toward afternoon my headache wore off, and very glad I was, as we expected to reach Halifax that evening, and I wished to be in good trim to enjoy my first visit to that city. I saw but little of my man that day, and dressed for dinner with an unaccountable lightness of heart. We reached Halifax at sunset, and a boat was at once lowered and sent off for letters and provisions. As it was so late we decided to postpone going ashore until the morning, and that evening was the gayest and pleasantest we had yet spent. Whether it was the reaction from my sufferings of the morning or not, I was in a really brilliant mood, and kept the others in constant laughter by my absurd *jeu d'esprits* and ridiculous stories. At ten o'clock the steward served a delicious little supper, and we drank an unwholesome nightcap in a bottle of "Pommery Sec," after which I sat down at the piano and put a musical finish to the evening. As we were saying "good-night," Dr. Fred, who had taken my hand in his, said, teasingly:

"When we go ashore to-morrow I am going to hunt up some patent crimpers for you. It is too bad that such an arm as this," looking admiringly at the white, rounded member which the rather short sleeve of my dress left partially exposed, "should suffer even in so good a cause," with a little nod at my curly fringe. "May I examine it a little closer? By Jove! it's a queer-looking scratch. Looks more like a puncture. By-the-way, I must put my morphine apparatus away now while I think of it. Would you like to see it?"

And he went in search of his coat, which the steward brought him from a locker where it had been stowed. However, I was destined not to examine the little instrument that night, for it was not to be found in either pocket of the light topcoat. Thinking that he must have dropped it out somewhere, we deferred its inspection until another time.



THE EVIL EYE.—"THE DRIVER CALLED TO THE CONSTABLE, 'I SAY BILL, COME IN HERE WITH YER LIGHT, WILL YER?' THE LATTER ENTERED."—SEE PAGE 554.

As I was undressing, I suddenly remembered that, in the pain caused by my headache that morning, I had neglected taking my watch from under my pillow, where I always put it on retiring. Of course the steward or the cabin-boy had removed it on making the berth, and had evidently put it in some secret place for safe-keeping, for nowhere could I find it. I was vexed at my carelessness, for I hated to have it run down; but, not wishing to arouse the steward, I resigned myself to the inevitable. In the morning my first thought was for my watch, and I touched the electric bell which summoned the cabin-boy, and instituted inquiries, all of which were unavailing. No one had seen it. I could not understand it. I distinctly remembered winding it and putting it in its customary place, and was equally sure that I had not removed it. A vigorous search was made in my stateroom, while at the same time the doctor was endeavoring to find his missing morphine-case. As we were occupied in our several endeavors, a conversation between the steward and cabin-boy attracted my notice. The steward was speaking.

"Never liked the fellow's looks myself."

"Don't see what he made off without his pay for."

"There ain't never any accountin' for them furriners."

"D'yer s'pose the cap'n'll pick up some one here?"

"Guess so."

The word foreigner made me think that it was my man who was under discussion, and I asked:

"What's the matter, steward? Anything wrong?"

"Yes'm—leastways one of the crew, a Rooshin chap, made off from the dingy last night and ain't turned up sence."

A sudden thought flashed into my mind, and the mathematical exercise of putting two and two together performed itself with lightning swiftness. The loss of my watch, the man's evident interest in it; the missing morphine-case and our conversation, in the presence of the sailors, regarding the administration of the drug; the scratch on my arm and my subsequent illness; my strange, unreasonable lightness of heart on the previous night, and the man's sudden defection. The thing was clear. The man had, either for its intrinsic value, to which I had opened his eyes, or for some more subtle reason, desired to gain possession of the trinket. The method of obtaining it had been unconsciously demonstrated by the doctor. It had been an easy matter for him to obtain the instrument, as the doctor had, as we afterward remembered, had it on deck in the afternoon: and in the night—the first part of which had been his watch on deck—he must have dropped over the companion-hatch, the doors of which were always kept locked at night, and so gained my stateroom and administered the drug, after which it was no difficult matter to find the object of his desire.

It was a triumphant vindication of my theory regarding the hyper-sensitiveness of woman's organization, and now that the man had disappeared, I could breathe freely and relate to my wondering sister the true cause for the depression and nervousness which had quite alarmed her. Of course efforts were made for his recapture, but in vain. He had hidden his tracks in a marvelous manner, and loath as I was to lose my precious watch, I scarcely considered it too great a price to pay for the unalloyed enjoyment of the society of a certain person who shall be nameless. The rest of our cruise was as delightful as perfect conditions and surroundings could make it, but as it does not materially affect my story, I leave it to the reader's imagination, and hasten on to the sequel.

Six months after the loss of my watch, I was summoned by telegram to the deathbed of my grandmother, who lived in a little out-of-the-way village some three or four miles from the nearest line of railroad. I had been recently married, and my husband, Dr. Fred Lawrence, was out of town attending an important consultation. The telegram was urgent, so, leaving an explanatory letter, I took a small bag and started at noon, one cold January day, hoping to reach the dear old lady, whose favorite grandchild I was, before she died. I accomplished my dull and tiresome journey without incident, and on reaching the station at B—— at dusk, found, waiting there, the lumbering coach which plied between that town and the little village which was my destination. As I took my seat, I found that I was the sole passenger, but, just as we were about to start, the door opened, and a man entered and took the seat opposite mine.

He was a tall, massive creature, so muffled in the collar of a dirty, rough ulster that I could not see his face, and as my own was covered with a thick, blue vail, my features were as completely hidden from his view. After a while the moisture of my breath made the vail exceedingly uncomfortable, and as the coach was, notwithstanding the cold, somewhat close, I felt that I could dispense with its protection, and took it off. At the same moment the other passenger, evidently from the same motive, turned down his huge, shaggy collar and tilted the soft felt hat back from his brow, revealing—my God! the horror of the recognition thrills me now!—the wretched, distorted visage whose dreadful, snaky gaze had exercised such an influence upon me. The recognition was mutual, for, as my vail fell from my shaking hands, he started up with the same inarticulate noise, half-cry, half-groan, which had escaped his lips once before, and then, clapping his hand to his side, he sank back in a heap on the seat, while still those eyes, under their half-closed lids, gazed steadily and fixedly into mine. What should I do? I dared not make an attempt to attract the driver's notice, lest my dreadful companion should strangle me with the coarse, talon-like fingers whose movements I had so often watched. Never had I encountered anything so terrible as that gaze—it held me as that of a snake holds the quivering, palpitating bird, while my whole spinal system seemed to have been turned to ice which chilled me to the heart.

Finally, finding that I could bear the agony no longer, and that unless I broke the spell which chained me, I should lose my reason, I determined to address him, thinking that an appeal to his cupidity, in the offer of a large bribe, might induce him to leave the coach. Moistening my quivering lips, I essayed once or twice to frame a sentence—in vain. At last I made a desperate effort, and brought out one trembling, scarce audible word, in as gentle a tone as I could command, and I assure you that never was the bleat of a frightened lamb less awful. "John!" No answer; still the immovable gaze. Thinking my feeble enunciation might have been lost in the rumble of the coach-wheels, I tried again, this time being able to utter a whole sentence:

"John, do you remember me?"

Still no response; not even the quiver of an eyelash; not the faintest token that he had heard my words: and yet those intent, ever-watchful eyes must have seen the motion of my lips, even if the ears were deaf to my articulation. Once more I summoned courage, and this time leaned a little forward, and, as I addressed him, the miserable, guttering light of the small kerosene lamp, which was the only illumination of the gloomy vehicle, gave one expiring flicker and went wholly out, leaving us in total darkness, save for a narrow shaft of pale, wintry moonlight, which filtered in through the imperfectly buttoned sides of the conveyance and fell athwart the face of the man opposite me. Great Heavens! Were the powers of evil and darkness leagued together to destroy my senses? Had that penetrating ray fallen upon any other part of that horrible face: upon the coarse, bulbous nose; upon the rough, unshaven cheeks; even upon the distorted, leering mouth, I could have borne it; but, as it lay directly illuminating those evil, horrible eyes, leaving the rest of the man in darkness, causing them to gleam and glitter in their motionless pertinacity with an unholy light, I could no longer bear it. Rising, with a sudden and desperate impulse, I uttered a shriek, which brought the horses to a quick halt and the driver to the door of the coach, though it in no wise disturbed the huge hulk huddled together on the opposite seat.

"What is it, ma'am?" asked the astonished John, as he looked in wonder from me to the quiet figure in the corner. "Was it ye that yelled?"

"Yes, it was," I replied. "Take that man out of this coach instantly. He is a thief and scoundrel. Either he must get out or I!" and, in the reaction of my terror, I burst into an hysterical fit of sobbing.

The driver saw that something must be done to change the existing condition of affairs, and, being unwilling to try to cope with a dangerous character, perhaps on a lonely road, his first attempt was one of the mildest persuasion.

"See here, my good feller," he said, in inviting and conciliatory tones, "this lady's a bit narvous and excited, ye see. S'pose yer humor her a bit an' come outside with me?"

To this there was no reply, and the driver, thinking the man was asleep, addressed himself to me, saying that, if he were a "hard ticket," the wisest plan would be to let him sleep until we reached S——, only half a mile farther on, where we could have him properly lodged in safe hands, and, though I insisted that he was wide awake, I willingly accepted the driver's invitation to share the box-seat with him.

The lock-up, which serves for purposes of detention in villages, was situated on the outskirts of S——, and we stopped to deliver our man into custody before entering the village. The driver, to whom I had related the bare details of the loss of my watch, and who was brother-in-law to the constable, succeeded in finding the latter at home, and returned to the coach to wake up his inside passenger. He called loudly to him once or twice, and then entered the vehicle in order to shake the Russian into consciousness. Suddenly he called to the constable, who was standing outside with a lantern :

"I say, Bill, come in here with yer light, will yer ?"

The latter entered, while I, on my elevated perch, began to believe the man was refractory, and that they were experiencing some difficulty in unloading him. My surmises, however, were soon ended. In a few moments both men reappeared, and the driver, coming up to where I sat, said :

"Say, ma'am, that 'ere thief in thar won't trouble you any more ; he's dead."

Ay, and it was so. The coroner's inquest which sat the next day upon the body returned a verdict of death from heart-disease, caused, undoubtedly, by the shock of the suddenness of our rencounter. Learning that a letter had been found in the Russian's pocket, my husband, who had become much interested in the strange chain of coincident circumstances, after detailing the curious story to the coroner, obtained possession of the document, which he had translated from the Russian language, in which it was written, into our own. I append a copy of it, as it may serve to throw some light upon the peculiar chain of fate which had linked the life of a delicate, young American girl with that of a rude, criminal Russian sailor. A free and corrected translation of the epistle ran thus :

"MY FREDERIKA : The time has been long since thou hast heard from thy Ivan, but now, my little one, thou shalt share the wonderful good fortune which has befallen him, and in a short time thou may'st once more behold him who lovest thee. God! But it has been a weary time since that night when a stroke of ill-luck knocked the wind out of our sails and sent us off on separate tacks! And now, what think you ? The green watch, that which thou seized from thy mistress's dead body, after I had done the little job for her, is again in my hands. How came it there ? How think'st thou ? Ah, cunning one, thou wouldst never guess that the little American to whom thou sold'st it had crossed the path of thy Ivan. Yet, so it was! Canst thou not imagine my surprise upon seeing the ugly thing, which I had last seen dangling from the waist of thy princess, ornamenting the belt of an American ? I tell thee, for a moment my cursed heart, which is always jumping into my mouth at the wrong time, gave such a yank that I nearly screamed. I heard the little fool boast of the value of the thing, and, believe me, my pretty one, thy Ivan played as neat a trick on the vain little Yankee as any thou hast ever heard of. Now it is mine again, and as soon as he whom thou lovest gets a good chance to sell the toy, that same day will see him homeward bound with a bit of money which shall keep his Frederika like a lady, away from the infernal place where his beauty is too well known for his safety. It was the devil's own luck that our pretty plan at the princess's should have gone to the bottom.

"Farewell, my little one. Every wind that blows carries to thee the love of thy devoted IVAN."

THE LACQUER-TREE.

CRUDE lacquer is the juice obtained from the *Rhus vernicifera*, a tree which grows extensively in Japan, bordering the fields, and planted in spaces which cannot be more profitably utilized. It grows to a height of fifteen feet to twenty-five feet, and in the Autumn the numerous pinnately divided leaves assume a brilliant yellow hue, the beauty of which hides the ungainliness of the tree. In the Summer the ends of the branches are laden with the grape-like clusters of a furrowed fruit, the mesocarp of which contains a considerable quantity of what is not inaptly named "vegetable tallow." The tree is propagated by means of cuttings, and is in its best state for the production of lacquer when it is from ten to twenty years old.

SONG.

BY J. B. DALTON.

I.

DOUBT not this heart, nor seek one answer more:
Doubt not this heart, that trusteth all thy own,
This heart, that trusteth all itself to thee.

II.

Who loves the life which only self can prize ?
Who hates not fear that e'en itself suspects ?
But this my heart dreads naught but thy delay.

III.

Sweet Faith, whose eye can watch love's beacons sure,
True as the Spring that rears her sister's flowers –
So hides this heart its promised troth for thee.

IV.

Doubt not this heart! Thine not for Spring alone.
Or Summer, but through Winter's bleakest rage,
Though every heart had fled, still near, still thine.

TOBACCO IN CANADA.

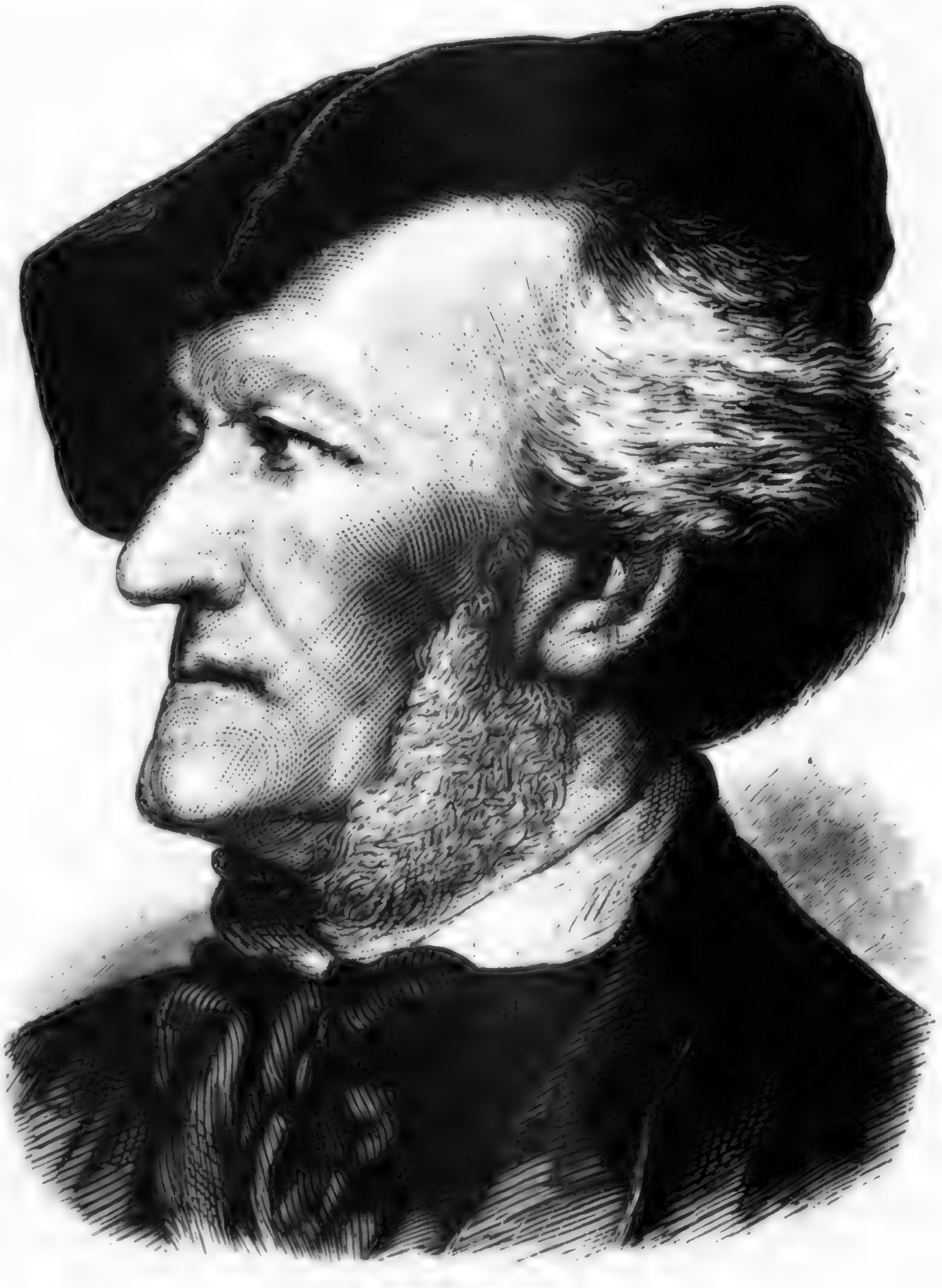
OF all the customs of the Indians which Jacques Cartier observed, that which struck him as the most novel and singular was the use of tobacco. In the narrative of his second voyage to Canada, in 1535, occurs the following quaint description : "The Indians have an herb of which, during the Summer, they gather a great quantity for the Winter, and which they prize very highly, and use (the men only) in the following manner : They dry it in the sun and suspend it from their neck, tied up in a little skin instead of in a bag, together with a horn [*cornet*] of stone or wood. Then, at all hours, they make a powder of the said herb, and put it in one end of the horn, and then place a live coal upon it ; and through the other end they blow so hard that their body is filled with smoke, so much that it comes out of their mouth and nostrils as out of a chimney. They say that this keeps them healthy and warm, and they never go about without these things. We have tried the said smoke, and having had it in our mouth, it seemed to contain pepper, so great was the heat of it." At that time the use of tobacco was altogether unknown in France, and although the plant had been brought to Spain and Portugal by the early explorers of America, it was only a quarter of a century after Jacques Cartier's second voyage that the French ambassador, Jean Nicot, sent the seed from Lisbon to France.

To "the fragrant weed" one of the Indian nations owed the name by which it was known to the French from the earliest times of the Colony. The Tionontates, who raised and traded in tobacco, were called *les Pétuneux*, or more usually *la nation du Pétun*, from *pétun*, an old French name of tobacco. Their country lay in the woody valleys of the Blue Mountains, south of the Nottawasaga Bay of Lake Huron, thirty-five or forty miles from where the town of St. Mary's now stands. Two days' journey to the east of them were the frontier towns of the Hurons, to whom they were akin, and whom they closely resembled in their mode of life.

RICHARD WAGNER: HIS LIFE AND INFLUENCE.

By Louis C. Elson.

History can rarely be written while events which constitute it are in progress. A battle cannot be adequately judged until not only the smoke of conflict, but the rancorous feelings of the opponents, have passed away. The great conflict in the musical field, in which Wagner was so active a participant—the combat between the German and the Italian, the old and the new schools, the musical impressionists and the purists—has been too recent to allow of any absolutely unimpeachable review of its scope and effect to be written as yet; but it is not too early, since the life of the great master has closed, to speak of many things which he has incontestably accomplished.



RICHARD WAGNER.

That Wagner was a genius may safely be acknowledged, even by those who dissent from his theories and deny their worth. The absolute frenzy with which he threw himself into his musical work, the uncompromising manner in which he defended every innovation which he made, the incredible labor he expended, not only on his works themselves, but upon making them intelligible to the world by pamphlets, essays and explanations, all prove the truth of Carlyle's adage that genius is only a capacity for taking pains. In Wagner's case, because of early trials and neglect, because of subsequent opposition and abuse, genius became almost a monomania.

Wagner was born poor, and in very trying times. May 22d, 1813, the Actuary of the City Police Court was presented by his wife with his ninth child, and named it Wilhelm Richard Wagner; he had not opportunity to do much more, for in October came the terrible battle of Leipsic, which was immediately followed by an epidemic fever among the unfortunate inhabitants, and of this, on November 22d, the father died, leaving the widow, yet young and attractive, with her baby of five months and the rest of her numerous progeny, to provide for.

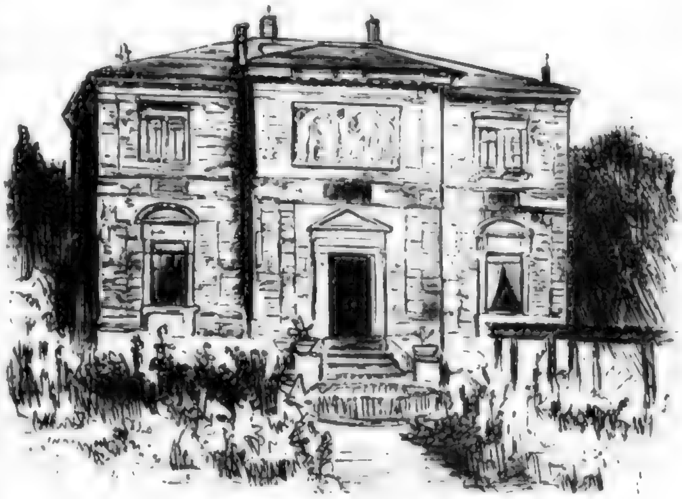
It was a trying ordeal, only solved two years later by Louis Geyer, a practical actor and painter, who had the courage to take upon himself the charge of the entire family by marrying Madame Wagner.

The stepfather seems to have taken the kindliest interest in the boy, and Wagner always had for him the affection of a son. The embryo composer had as yet made no sign of musical ability. He was evidently to be *sui generis*, and did not even imitate Beethoven or Mozart in possessing a musical childhood. The only evidence of talent in this direction he gave to his stepfather as the latter lay on his deathbed, by playing a couple of rather jingly pieces of no difficulty, in his hearing, upon the piano. Geyer, ever full of solicitude for his stepson, spoke to the mother, questioningly, "What if the boy actually had a talent for music?"

But this was entirely forgotten after his death, and Wagner's youthful years show no trace of the power which lay dormant in him. Yet he was not (like Sir Walter Scott) accounted dull, but merely moderately gifted. He early evinced, however, a passion for poetry, and his original works in this direction show a degree of bombast which in later years became grandeur and pomp.

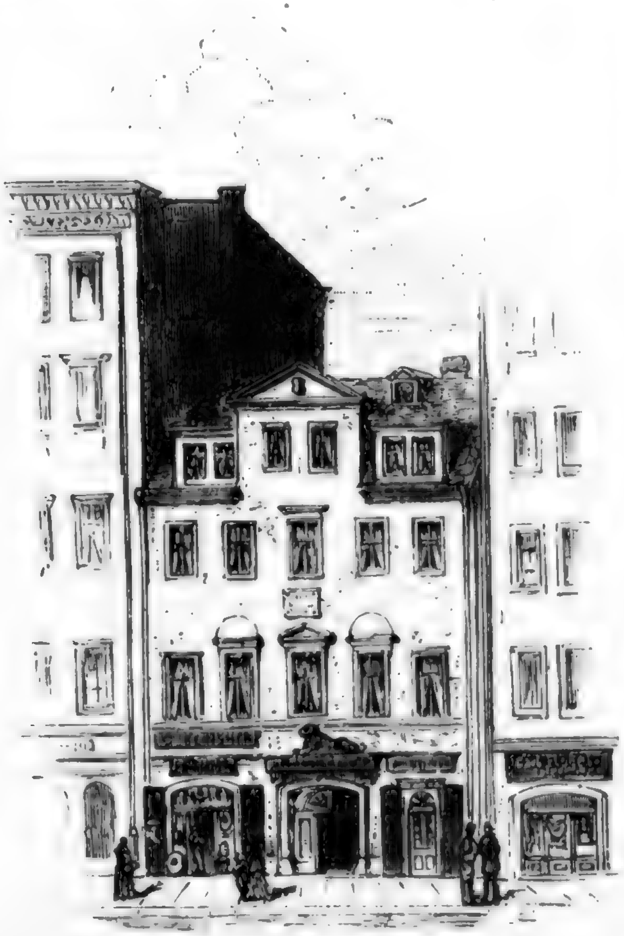
which were always present in his librettos. Shakespeare in literature, Weber in music, were the two founts from which he began to imbibe inspiration, and it only illustrates the power of early impressions when we add that he always regarded the two with reverence even in later years; although he had learned the first only in a translated form, and the second seems utterly foreign to his line of musical thought. His literary endeavors in childhood bore a strong resemblance to those of De Quincey (the English opium-eater), for his first tragedy was a combination of "Hamlet" and "King Lear," and by thus piling Ossa upon Pelion, he killed forty of his characters before the last act, and was obliged to allow them to reappear as ghosts in order that the play might go on.

It was Beethoven's music which at last awoke the slumbering tone-genius in Wagner's breast. Just as it seized upon Schubert with a fierce fascination, and filled his last moments with delirium, so the hearing of Beethoven's Symphonies, given by the Gewandhaus Orchestra at Leipsic, filled the soul of the lad of sixteen years with a wild desire to do something great in the art. A furious course of self-instruction was begun, but at first amounted to little. Subsequent study with Gottlieb Müller did little more, for the teacher could not understand the strange, impetuous nature of the boy, nor would the latter accord respect to what he thought the pedantry (*i.e.*, the conservatism) of his master. A few unimportant compositions resulted from this study, and it is to be noticed that Wagner, with characteristic ambition, leaped at once to the larger forms of composition, and never cared much for the shorter vein of writing in which Schubert was so successful.



WAGNER'S HOUSE AT BAYREUTH.

It was Theodore Weinlig who at last proved to have the key which was to unlock this vast musical storehouse. Weinlig was Cantor, or Director, of the Thomas-School in Leipsic, a position which the great Bach once held. He evidently recognized the fact that the mountain torrent of Wagner's ideas would never become a placid lake; nevertheless he did much by forcing the young man to study Mozart, and carefully corrected the too radical tendencies which he exhibited. The course was a very short one; and, indeed, Wagner, even as much as Schubert, may be called self-taught, for his greatest impetus came from the constant perusal of the works of Beethoven, which he did with unremitting zeal, memorizing, or copying, almost all of his greatest works.



HOUSE AT LEIPSIC WHERE WAGNER WAS BORN.

And now we find the young man of nineteen launched upon his musical career. It began successfully, for, after a futile attempt at Vienna, he succeeded in getting a symphony accepted in Leipsic, and it was actually performed at the Gewandhaus, January 10th, 1833. But in Germany such a success can be attained and yet leave the composer poor, and this was the case with Wagner. At the age of twenty we find him in Würzburg, as chorus-master at the opera, on the slenderest of salaries, and here was written his first opera, "The Fairies." As yet he had evolved no theories in operatic composition, but even in his earliest operas we find a loftiness of ideal, which ennobles even the forms which he afterward strove so earnestly to overthrow. Thus "Rienzi" is greater than most Italian operas, although written on the Italian model, simply because Wagner was a greater musician and a more earnest man than his Italian contemporaries.

From Würzburg to Magdeburg, from Magdeburg to Leipsic, from Leipsic to Riga, the young conductor went, with restless activity, hoping to achieve success somewhere, and continually working at some new opera or libretto. From the very first Wagner was his own poet, and he held that the greatest perfection in the opera form could only be attained by this combination. The early Greeks had combined words and music in an indissoluble marriage, and he felt that such a complete union was indispensable to a high development of both arts in opera. This, then, although not formulated as yet in words, was, by practice, his earliest theory.

Yet beyond this, far from discarding Italian style, he sought to build upon and improve it, as witness his "Liebesverbot" ("Measure for Measure"), in which the vein of both Bellini and Auber is developed. Wagner's first marriage took place just before he received the appointment as Music-director in Riga. His life with his first wife was not a happy one, and many of his enemies have taken advantage of this fact to detract from the character of the composer. It was certainly not Minna Planer's fault that she did not make Wagner entirely happy. Beautiful in person, charming in manner, and evidently loving the young composer, she made a sacrifice in marrying him, and in the subsequent wanderings and poverty which the match entailed upon her she never complained. What, then, could have led Wagner to the ungrateful act of separating from one so faithful during adversity? She had committed the one unpardonable sin of not comprehending the length and breadth of her husband's genius. Wagner needed some one by him who should be the abject worshiper of his genius; there never was a nature more susceptible to impressions from without than this composer, who seemed to stand at bay and fight the world. In his later years the very surroundings of his study were made to bring their influence upon the work he was composing, and those who laugh at the character which could fret itself into anger about the shade of a dressing-gown, or the trimming of a coat, should understand the fact that the master felt such a shortcoming as keenly as another would a bad pen or a rickety writing-table. Wagner was by nature an autocrat, and demanded all that could be given him, while in return he gave — immortal thoughts. If his first wife could not take these thoughts at their par value, all her sacrifices, all her beauty, all her affection, went for naught.

It may be evident, however, from this, that Wagner the man was not always as estimable as Wagner the musician. "Rienzi," chiefly composed in 1839, was the first grand opera which Wagner had produced. With his characteristic ambition, he decided, that none but the greatest operatic stage would fit the work, and at once set out for Paris with the score, his pretty wife, a large Newfoundland dog and a very light purse. The acquaintance of Meyerbeer, which he formed *en route*, seemed to promise success in the French metropolis. It led only to a hope constantly deferred, and finally the bitterest enmity. It is scarcely to be doubted that a personal hatred, bred of envy, led to the attacks which Wagner subsequently made upon Meyerbeer, and which he afterward extended to all of Meyerbeer's race. It is utterly futile for the ultra-Wagnerians to endeavor to prove that Wagner's attacks upon "Judaism in Music" were at all in a "Pickwickian" sense. Wagner detested the man who was all-powerful in the operatic world, while he, the greater composer, was starving in Paris. In the same manner he at first disliked Liszt, whose crime it was to be prosperous while Wagner was poor. Meyerbeer was a small nature, who did not care to take much trouble in elevating possible rivals; Liszt was a noble mind, who passed over the young composer's envy, and, finding him possessed of the "divine spark," did all that could be done to assist him, and finally won his friendship. Had Liszt been only lukewarm in the matter, as Meyerbeer was, there would have resulted attacks upon him, and possibly upon the bad influence of great pianists in music. This branch of Wagner's theories had its root in personal feeling, and the adherents of the musical essayist will yet relegate them to their proper position, instead of trying to excuse them or to distort their actual *animus*. That Wagner had many friends among Jewish musicians does not in the least invalidate our statement, but only redounds to the credit of those who were so careful to discriminate between the composer and the man.

Wagner's Parisian experience was sufficient to embitter a more amiable nature. It was starvation and hack-work; a dancing of attendance, first at the doors of the Opera and the Conservatoire, and then at the lesser play-houses, and finally at the smallest boulevard theatres, with equal failure at each. He was even rejected as a chorister at one of the last named. Then came cheap musical arrangements, even for cornets, articles for the newspapers, short songs offered from publisher to publisher, and every kind of "potboiler" which his active pen could produce. Dark days, indeed; yet in these were produced some of Wagner's most natural and beautiful works. "Rienzi" was completed in 1840 and sent to Dresden. "The Flying Dutchman," a vivid reminiscence of his terrible voyage from Riga to France, was finished the year after, and was one of Wagner's most spontaneous works, being completed in less than fifty days. It is an opera which the composer has endeavored to discard as a youthful indiscretion, but it will none the less continue to be one of the most effective of short operas. "Tannhäuser" and "Lohengrin" also were begun at this time.

And now the tide turned. Wagner was not a man whom circumstances could keep poor, as they did Mozart or Schubert. He was sure, sooner or later, to work on his own deliverance, and this thought sustained him throughout his Parisian poverty. Never once did he lose faith in his own powers and worth, and when word came that the Dresden Opera House had accepted "Rienzi," he was not overcome by the revulsion of affairs, but calmly transferred himself and wife—the dog had been lost—from Paris to the Saxon city, and awaited the public ordeal. But he never forgave the French their lack of appreciation, and years afterward his arrogantly offensive burlesque of "The Siege of Strassburg," in which every Frenchman, from Napoleon to Offenbach, was held up to scorn and derision, proved how long this great musician could bear malice. Just as he had before attacked the Jews because Meyerbeer had underrated him, so he now attacked the entire French nation because the managers of Parisian theatres and music stores had allowed him to go hungry.

"Rienzi" made a great and immediate success, and the struggling artist found himself at once an acknowledged leader in the operatic world; and all this before a single theory had been evolved or a solitary reform accomplished. After this brilliant triumph, it may well be imagined that the managers of the Dresden Opera were only too glad to bring out the "Flying Dutchman"; but there was such a radical difference between the two works, that the public were rather astonished than pleased. Nevertheless, it led to a correspondence between the influential composer Spohr and Wagner, and the former conducted the opera in Cassel a year later, and gave Wagner all possible commendation. It is strange to chronicle that Spohr, the conservative and melodic, the last great musician to recognize Beethoven, should have been the first to acknowledge the genius of Wagner. An appointment as Hof Kapellmeister in Dresden soon followed, and now, at the age of thirty, we find Wagner free from pecuniary care, in a position of some eminence, with influential friends, and the world opening brightly before him.

During the seven years of Wagner's stay in Dresden there is little to say of his career. "Happy are the countries which have no histories," is a proverb that may apply in some cases to men as well. There is but little question that the recuperation which Wagner had in Dresden fitted him for the yet greater work which lay before him. Yet none may suppose that this was a period of inactivity. On the contrary, the work was constant and unremitting, but this was in accord with Wagner's delight. Was he not leader? And a bold,

; forming and active leader he became. His reading of the Beethoven Symphonies in 1846 won him both praise and blame. "He individualized the reading too much," said some. "It only proves that Mr. Wagner values himself more than the composer," said others; but the fact remains that the great Ninth Symphony made its first entire success under his leadership; that Niels W. Gade said that "it was worth the journey from Leipsic if only to hear the contrabasses in the great recitative in the *finale*;" and finally that, in reading Beethoven to-day, the best conductors are very glad to follow Wagner's ideas. During this epoch, also, "Tannhäuser" was completed, sketches for "Die Meistersinger" begun, and "Lohengrin" composed. "Tannhäuser" was first performed at Dresden, October 19th, 1845—and failed. It was the beginning of the real Augean labors. Wagner had composed a work in a new vein, and was in advance of his age, just as Homer was in singing his poems to barbarians, or Shakespeare in giving forth nineteenth-century thoughts in the sixteenth century.

Naturally there was abuse from many quarters, and Wagner's own imperious nature added fuel to the fire. He had, however, the courage of his conviction, and manfully began the effort, by essays, example and performance, to lead operatic art into a higher channel. It is in this that Wagner's nature stands forth in its finest colors. He was never content with an achievement, but must push beyond it. "Excelsior" could never become the motto of any art life so truly as that of Wagner. It seems strange that, with this palpable fact in their favor, the Wagnerian essayists have for ever harped upon that other string, that their hero was also a model of all the humbler virtues. Not content with picturing him as Jove himself, they proceed to make him a Jupiter without any private failings. Johnson loved a "good hater," and from this era onward Wagner showed himself very thorough in this branch, and if his critics were manifestly unjust, let us be content that he was amply able to repay vituperation with most effective sarcasm.

One effect, however, of the reception of "Tannhäuser" in Dresden was to make him discontented with his position there. Nevertheless, "Tannhäuser" never entirely left the *répertoire* after that first unsatisfactory performance. Liszt soon brought it forward in Weimar, and spite of the ascendency of the Meyerbeer operas, it was performed in many different cities during the next few years, and volumes of criticism followed every performance. Wagner was fairly launched as a radical reformer, and Schumann and Spohr hastened to pay tribute to the powerful thoughts of the new opera even while condemning its departures from rhythm and established form.

With the completion of "Lohengrin" Wagner felt that he had gone yet further from the beaten track, and the management of the opera, too, cordially concurred in the opinion, since only a fragment of it was performed in 1848. This year was important in other ways to Wagner, for now he first thought of making a great opera which should be essentially national, and began reading the "Nibelungen Lied," the great German *saga*, with a view to using it for this purpose. When Wagner's giant mind took up a subject it was impossible to predict how far it would be pursued. Thus "Tannhäuser" led to the "Meistersinger," "Lohengrin" led to "Parsifal," and a study in the "Nibelungen," to set the character of *Siegfried* to music, led to the chain of four operas (of which one is a prologue), called the Trilogy.

The second great event of the year was his entering into politics and making a speech which, though moderate in tone, yet betrayed a desire for change in the administration of affairs. This led to a reprimand from the police. The next year Wagner was yet more outspoken, and is even said to have marched with the revolutionists. The result was an order for his arrest, which led him to fly to Liszt, at Weimar, for safety, when that great and whole-souled musician managed to smuggle him out of Germany just in the nick of time; and behold our musician again in Paris, this time no longer unknown, but nevertheless a fugitive and an exile. The years from 1849 to 1861, which Wagner spent enforcedly absent from his native land, were the ones which gave to the world his theories in their full significance. Paris again would have none of him, and Wagner went on to Zurich, where his wife and a circle of friends soon joined him. Here he first produced a long series of essays on art, none of which were widely read until he produced the famous attack on Judaism in music. The commotion caused by this work induced the public to search for other essays by such a bold writer. Agitation was always the road to success for Wagner. It was always a combat which forced the eyes of the world upon him, and his own genius could win the day if once the attention of those competent to judge was directed toward him.

And now there came to his aid, with the most practical assistance, the friend to whom, next to Wagner himself, the world is indebted for the great reforms in modern music, Franz Liszt, who, on August 28th, 1850, gave the first performance of "Lohengrin" in Weimar. Wagner had already, during his flight to Paris, heard Liszt conduct "Tannhäuser," and was amazed at the intuition with which all his intentions were understood, and during his saddened sojourn in Paris had sent him the score of "Lohengrin" as a last hope, that it might be heard. The above performance was the noble answer. Liszt also used his pen for the cause, and poured out pamphlets in Germany. The performance was a success. It was the very beginning of the modern school of opera in the world, and Liszt wrote to the exiled composer: "Thus far have we brought the cause. Give us now a new work, that we may bring it yet further." Wagner recognized this deed by a most hearty dedication of the score to Liszt.

Some years afterward Liszt visited Wagner at Luzerne, in Switzerland, and heard part of the "new work" which was to bring modern music "yet further," and speaks of it in a letter as a "glorious new world which I have long desired to know;" and again: "It towers over our whole art epoch like Mount Blanc above the surrounding mountains." This great work was Wagner's *magnum opus*, "The Ring of the Nibelungen," which occupied him at intervals from 1849 until 1874, and was first performed entire in Bayreuth in 1876.

Wagner's exile, of course, had many other events in its course, but it is unquestionable that the residence at Zurich brought him under the influence of Schopenhauer's philosophic views, which were the impelling forces which guided in the construction of this vast work; and, as Schopenhauer drew his philosophy largely from Buddhism, the whirligig of time has brought it about that Paganism has aided greatly in the building of one of the most beloved of modern arts. A trip to London was made during the period of exile (as well as another later); but England practically rejected Wagner, as it did Schumann, and would have no other god beside—Mendelssohn.

In 1857, the work on the "Nibelungen" was broken in upon by a new opera—"Tristan and Isolde"—in which, in a more compact shape, and with far less ambitious

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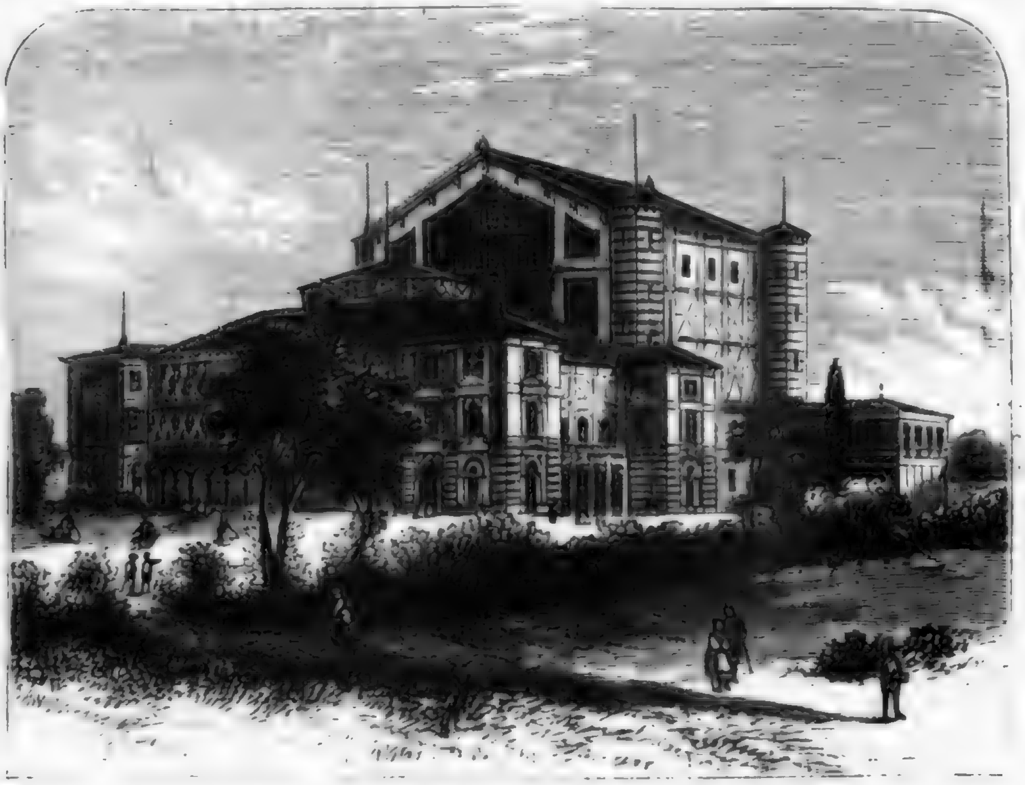
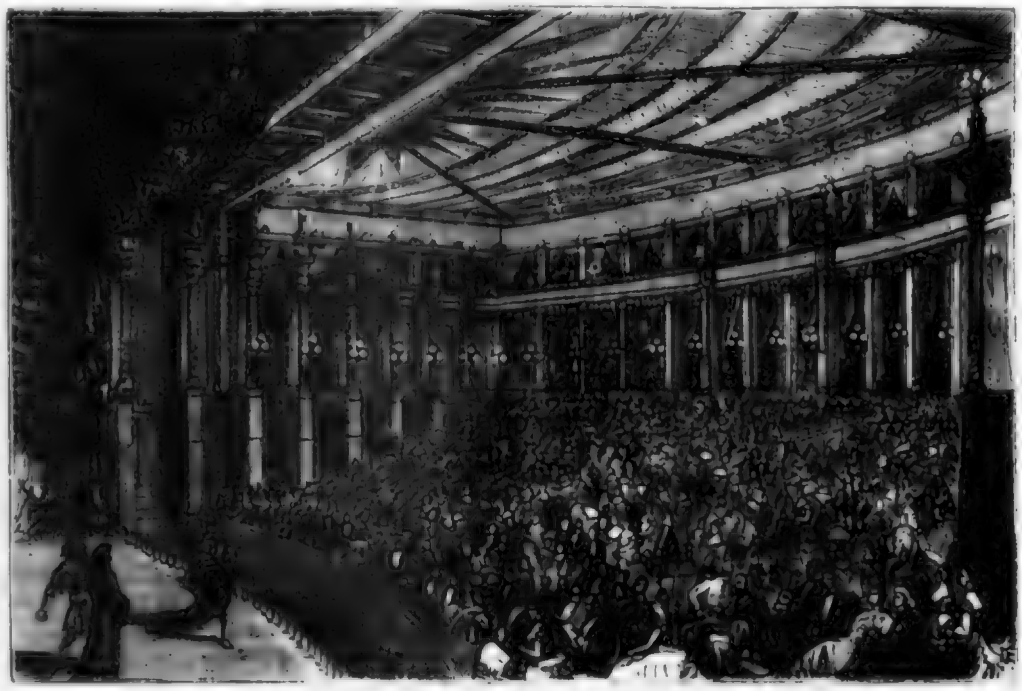


THEATRE AT BAYREUTH—EXTERIOR.

views, Wagner gives forth all the effects which form the basis of his latest operas. Although "Tristan and Isolde" can be produced upon a smaller stage than most Wagnerian operas, it is the first opera which he acknowledges to be representative of his musical views.

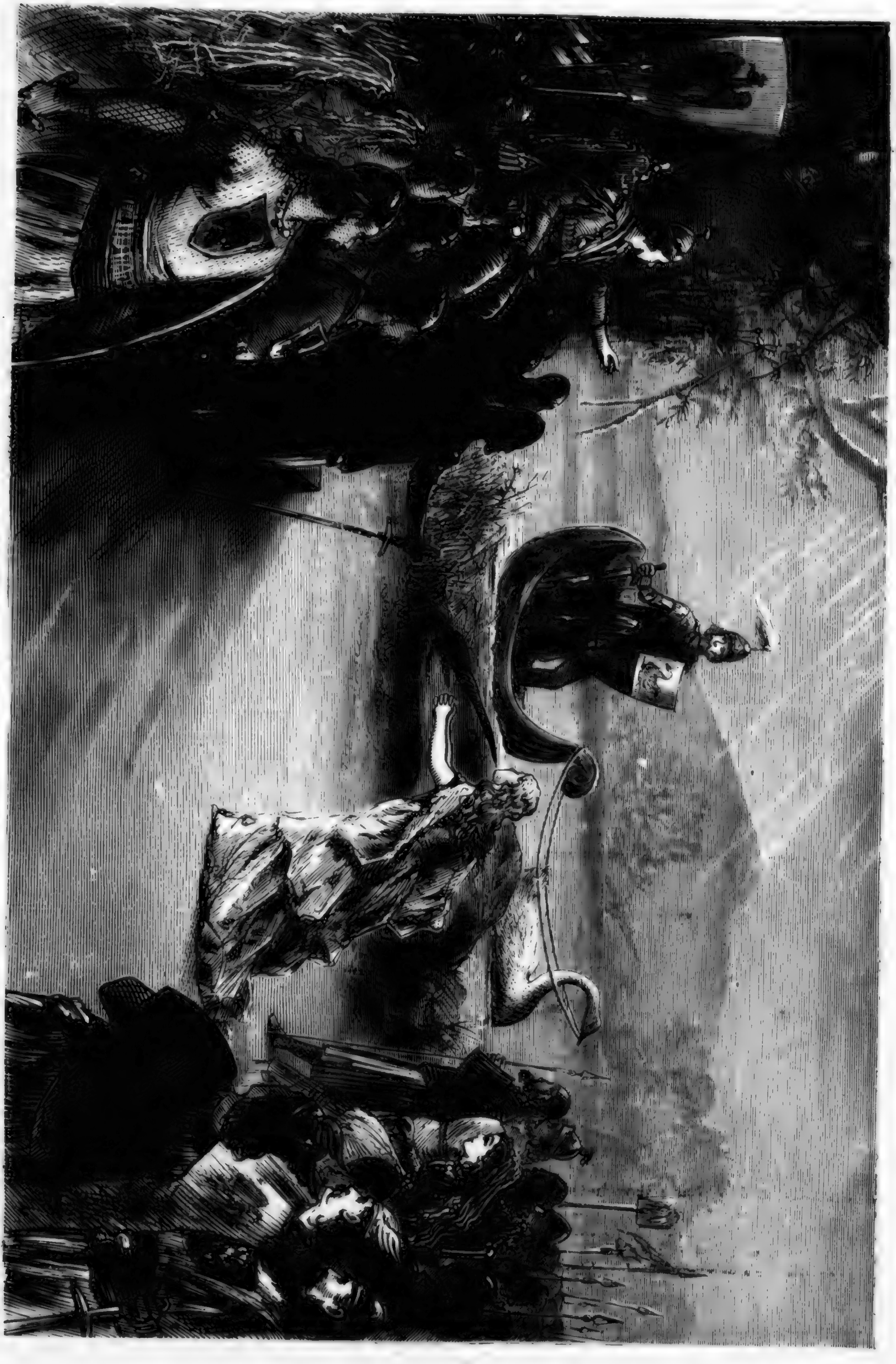
Another visit to Paris followed, which finally resulted in the Emperor Napoleon III. giving orders to perform "Tannhäuser" with the utmost splendor. This was due to the scion of a very musical family—the Princess Metternich—but it did not produce the desired result. A cabal was formed, almost a riot ensued, and, after three performances, the opera was withdrawn. But the ardent princess did not stop here. She secured for the "politically dangerous" Wagner a permission to enter all German states except Saxony, and thus ended his banishment. In this, again, the friend and co-worker Liszt co-operated. A year later all reservation was taken off, and the exile was once more a free German. About this time the separation from his wife took place. The marriage had been childless, and not a happy one. The unfortunate Minna Planer Wagner died in 1866.

In May, 1864, there came to the rescue of the still pecuniarily unsuccessful composer another friend, yet more powerful than Liszt — King Louis II. of Bavaria. Nero, Charlemagne, Louis XIII., Henry VIII., have all been musical monarchs, yet all of these together have not had the influence that this king exerted on the cause of music by making Wagner's cause his own.



THEATRE AT BAYREUTH—INTERIOR.

Thenceforward there was no money care, there was no exile, and no further doubt to harass the great musical reformer; he had but to work out his theories in his own way, assured that the world would, at least, give him a hearing. From happiness to happiness his lot now seemed to proceed. The "Meistersingers" was produced under these pleasant conditions, and it is the master's most genial, most human, most perfect work. In it he grandly satirizes his opponents, very much as Aristophanes in Athens satirized the demagogue Cleon. It is not hilarious wit; it is humor of the purest, clearest and most satisfying type, and it is as fine a picture of mediæval times as Walter Scott or any other novelist or historian ever drew. Wagner was in the zenith of his success; the struggles of earlier years were past; he enjoyed the favor of a ruler, who entered enthusiastically into his musical views, and was ready to make any sacrifice for him. But his home was solitary. In 1870 he married a woman who more thoroughly understood him than any one else on earth; a woman who had seemed unattainable to him in former years, for was she not the wife of Von Bülow, and he the husband of Minna Planer? Death and the divorce court put even these barriers aside, and August 25th, 1870, he married Cosima von Bülow, the daughter of his friend Franz Liszt. A stranger marriage was never more happily crowned. No poetry can be too transcendent, no thought too imaginative, to portray the absolute unity of this pair. It can only be voiced by Wagner himself, in a poem which he attached to the "Siegfried Idyll" (an



SCENE FROM WAGNER'S OPERA OF "LOHENGRIN."

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orchestral work written for, and performed on, Madame Wagner's birthday, in honor of their only son Siegfried), which we have thus translated:

"Thy sacrifices have shed blessings o'er me,
And to my work have given noble aim:
And in the hour of conflict have upborne me,
Until my labor reached a sturdy frame.

"Oft in the land of legends we were dreaming
Those legends which contain the German's fa
Until a son upon our lives was beaming,
And Siegfried was our youthful hero's name.

"For him and thee I in these tones am praising:
What thanks for gifts of love could better be?
Within our souls the grateful song upraising,
Which in this music I have now set free.

"And in the cadence I have held united
Siegfried, our dearly cherished son, and thee.
The harmonies which here to thee I'm bringing
But speak the thoughts which in my heart are springing."

Madame Wagner lives—like the great Clara Schumann happiest in working for the advancement of the fame of her dead husband.

A further culmination to the happiness of the composer came in 1876, when the Bayreuth Theatre, built expressly for Wagner, was opened with his "Trilogy" entire. He had scarcely expected to live to see this enormous work (requiring four nights for its representation) performed. Yet not only did Providence accord him this, but yet another work—his last—the glorious "Parsifal," was added to the list before he passed away. It was a peculiar coincidence that the last work he directed was the symphony spoken of at the beginning of this article, which had been lost, and after nearly fifty years rediscovered and presented to him by his loving wife. It was in Venice, also, on the birthday of his wife. And as the old man stood directing the work which the ambitious youth had completed a half-century before, he said, sadly:

"I shall never direct again. I shall never write more. Soon I must die. To-day I feel this more than ever."

Some two months later—February 13th, 1883—Wagner was in his study, in the palace he had rented in Venice, writing, as was his custom. It was a rainy and dismal day. Wagner had felt depressed by the weather, and his wife had stationed the trusty servant Betty Bürckel at the door of his room to notify her if her husband should require anything. Several times the wife had come back to ask the servant if Wagner had asked for her. Each time the reply was, "No, madame. He has been walking up and down the study, as he usually does."

The wife was too devoted ever to interrupt her husband when at his work, and therefore turned away. At one o'clock Wagner called the maid, asked if his gondola had been ordered for the afternoon, and then ordered soup to be served in his study. This was often his custom when in a "gray" mood, when he would lunch or dine alone. Soon after the soup had been served, the maid heard Wagner hastily walk to and fro, and finally burst into a prolonged fit of coughing. She approached the door, but although the coughing had turned to groaning, had such reverence for her master's orders, that she dared not cross the threshold. She was about to turn and call her mistress, when she heard Wagner call her name. Rushing to him, she found him lying on his sofa, with a frightfully strange look on his face.

"Call my wife—and—the doctor," were Wagner's last words. Madame Wagner was instantly beside him. Pillowing his head against her breast, she sent the affrighted servant for Dr. Keppler, the family physician. Wagner groaned and seemed racked by throes of intense anguish, but could not speak. At last he sank, as his wife thought, to sleep. It was the sleep of death. Thus Wagner died in the arms of the one whom he held dearest of all on earth.

We have said that it is too early as yet to estimate the worth of all of Wagner's works. It is as yet doubtful if all his theories will be accepted. His repression of rhythmic melody, his very complex orchestration, his constant use of guiding motives as clews to dramatic events, may be partially accepted by all coming composers; yet the abolishing of time seems to us an unlikely eventuality in music. It is far more probable that with his theories will be combined something of the Italian melody in operatic form. The dramatic unity which he has given to his works will certainly be held as a model for all time. His influence has extended over all civilized countries. Verdi in Italy, Saint-Saëns and Gounod in France, Tschäikowsky in Russia, and a hundred besides, all write differently to-day from what they would have done had there never been a Wagner. The smiling *prima donna* who comes down to the footlights in an Italian opera hand in hand with the smirking baritone who has just vowed vengeance upon her seems more utterly inane than before because of Wagner. The rank formalism of such an opera, the suspension of the action after each duet, aria, or chorus, seems absurd and unnatural because of Wagner. The pretty little accompaniment of flute and harp in a mad scene, full of soprano fireworks, seems outrageous to common sense because of Wagner. It needed a tempest, such as this man was, to clear the musical atmosphere. If in judging of his work and in speaking of his life we have not glossed over the evil features, it is because we feel that it is doing an ill service to the great man to place him in a false light before the reader. He was not forgiving, he was not unselfish, he was not liberal, he was not sweet-tempered, nor even always fair-minded, but he had some noble qualities, nevertheless. He was as firm a friend as he was a bitter foe, and we may judge him as we judge Socrates or Shakespeare, whose private lives may not in all ways meet with preconceived ideas, because he was, like them, a great genius who has elevated our world by living in it.

Longevity of Fish.—Professor Baird says that there is nothing to prevent a fish from living indefinitely, as it has no period of maturity, but grows with each year. He is authority, likewise, for saying that carp have attained an age of two hundred years. He also says that within fifty years a pike was living in Russia whose age, according to tradition, dated back to the fifteenth century. Probably some persons will doubt what is said by Professor Baird about the age a fish can attain. If they do, they are simply doubting the best-known authority on fish. The Russian Minister says that in the Royal Aquarium in St. Petersburg there are fish to-day that have been known by the records to have been in it one hundred and forty years. Some of them are, he says, over five times as large as when they were captured, while others have not grown an inch in length. An *attaché* of the Chinese Legation corroborates this statement. He says there are sacred fish kept in some of the palaces in China that are even older than any of those in Russia. Goldfishes have been known to have belonged to one family for over fifty years.

XUM

IN SWITZERLAND.

BY AMY LEVY.

ABOVE my head the sky is blue,
Matching the rippling lake in hue.
All round about the mountains rise,
A green delight to weary eyes.
Here, where the place is warm and fair,
Where soft moss grows, where all the air
Is sweet with pungent scent of pine,
Stretched, prone and passive, I recline.
Around me lie the bags and rugs,
The basket, boiler, teapot, mugs,
And all the other things that we
Have carried up for work and tea.
Walled round with tomes of ponderous size,
Her pen the busy Ellen plies.
Kit Marlow is her theme. Enough
I've had of all your dead man's stuff.
Kit Marlow's dead since long ago,
And I'm alive to-day, I know.
Heigho! I kick my heels i' the sun!
What matter if the work's undone?
Give me the warm, sweet air, the sound
That Nature whispers soft around,
The lights and shadows in the trees,
And let them write their books that please.

"GULLIVER'S TRAVELS" AND A SIMILAR BOOK IN JAPAN.

IN 1774 there were published anonymously in Japan, under the title "Wasobiyoë," four small volumes of fabulous voyages, portions of which bear a marvelous likeness to some of the adventures of Captain Lemuel Gulliver, of Redriff and Newark, which were printed forty-seven years earlier.

The odd coincidences which group themselves round Swift's masterpiece are of a suit with its own extraordinary contents, as to which the Irish bishop said that the book was full of improbable lies, and that for his part he scarcely believed a word of it. Shortly after its appearance, a Jonathan Gulliver, combining the Dean's name and his hero's, turned up as a member of the New England Parliament; and a Lemuel Gulliver in the flesh lost his cause in some English assize court "on his ill reputation of being a liar." For the voyage to Laputa, Swift is considered to have taken hints from "The Man in the Moon," by Domingo Gonzales, 1638, written by Dr. F. Godwin, Bishop of Llandaff; and the fifth chapter of that voyage was clearly suggested by the twenty-second of Rabelais's fifth book. It has been pointed out, too, that there are in that remarkable little book "Furetiriana" (Lyons: m.dc.xcvi.) some spurious missionary's letters from Madagascar and Siam, which, without any manner of doubt, must have been familiar to and used by Swift. Swift's mind ran much upon Japan, not an unnatural consequence of his political duties with Sir W. Temple in William III.'s reign, when the Dutch were the only traders with Dai Nippon. Gulliver had lived long in Holland, pursuing his studies at Leyden, and spoke Dutch well. He was taken by Japanese and Dutch pirates in the Laputan journey, and subsequently gave himself out for a Hollander in Luggnagg, whose king sent ambassadors to Japan; and from Luggnagg—the country of the Struldbrugs—Gulliver actually went to Japan, and thence got home in a Dutch ship.

> "There, is, indeed, a perpetual commerce between this kingdom (Luggnagg)"—writes Gulliver—"and the great Empire of Japan, and it is very probable that the Japanese authors may have given some account of the Struldbrugs; but my stay in Japan was so short, and I was so entirely a stranger to the language, that I was not qualified to make any inquiries. But I hope the Dutch, upon this notice, will be curious and able enough to supply my defects."

This is, perhaps, one of the strangest examples of the second-sight of human genius ever traced, and brings us straight back to Shikaiya Wasobiyoë, one of whose imaginary voyages is to the Land of Perennial Life, where there were neither deaths nor births. "One death might, indeed, occur once in every thousand or couple of thousand years, and would be compensated by one birth; but this was only a rare exception among the myriads of inhabitants. But some few volumes of the Buddhist Scriptures, brought to this Land in ancient times from India and China, described heaven in such glowing terms that these immortals were filled with quite a desperate admiration for death and a distaste for their own never-ending existence. Those who occasionally died were the envy of the nation, and numbers retired into the mountains and remote valleys to study the art of Death, as though it were an art magical, and there they starved and poisoned themselves all to no purpose. If a visitor said of a child, "The little thing does not look as if it would live long," he gave the parents the greatest pleasure, and they would reply, "Ah, if only what you say may come true!" Wasobiyoë, who at first laughs this mania to scorn, at last finds that the prospect of never-ending life year after year and century after century begins to pall on him, and, after a stay of three hundred years or so, becomes slowly converted to the native notions on the subject of death.

Now let us listen to Swift:

> "In this Island of Luggnagg the appetite for living was not so eager, from the continual example of the Struldbrugs before their eyes. . . These commonly acted like mortals till about thirty years old; after which, by degrees, they grew melancholy and dejected, increasing in both till they came to fourscore, when they had not only all the follies and infirmities of other old men, but many more, which arose from the dreadful prospect of never dying. . . . From what I had heard and seen, my keen appetite for perpetuity of life was much abated. I grew heartily ashamed of the pleasing visions I had formed, and thought no tyrant could invent a death into which I would not run with pleasure from such a life."

In this spirit Wasobiyoë attempts his own life several times without the least success, and finally mounts one of the riding-storks of the country, and, at the rate of a thousand leagues a day, flies all over the world and the universe, and at length arrives at the Land of Giants. Gulliver, it will be recollected, is rapt from Brobdingnag in his box-house by a gigantic eagle—the rukh of the East—which traveled a hundred leagues in two hours. On alighting in Giant-land the Japanese Gulliver espies a broad road running through a large bamboo thicket, which soon turns out to be merely a footpath through a cornfield, where every stalk was as tall as one of the largest Japanese bamboos. The English Gulliver says:

> "That which at first surprised me was the length of the grass, which, in those grounds that seemed to be kept for hay, was about twenty feet high. I fell into a high road, for so I took it to be, though it served to the inhabitants only as a footpath through a field of barley; the corn rising at least forty feet."

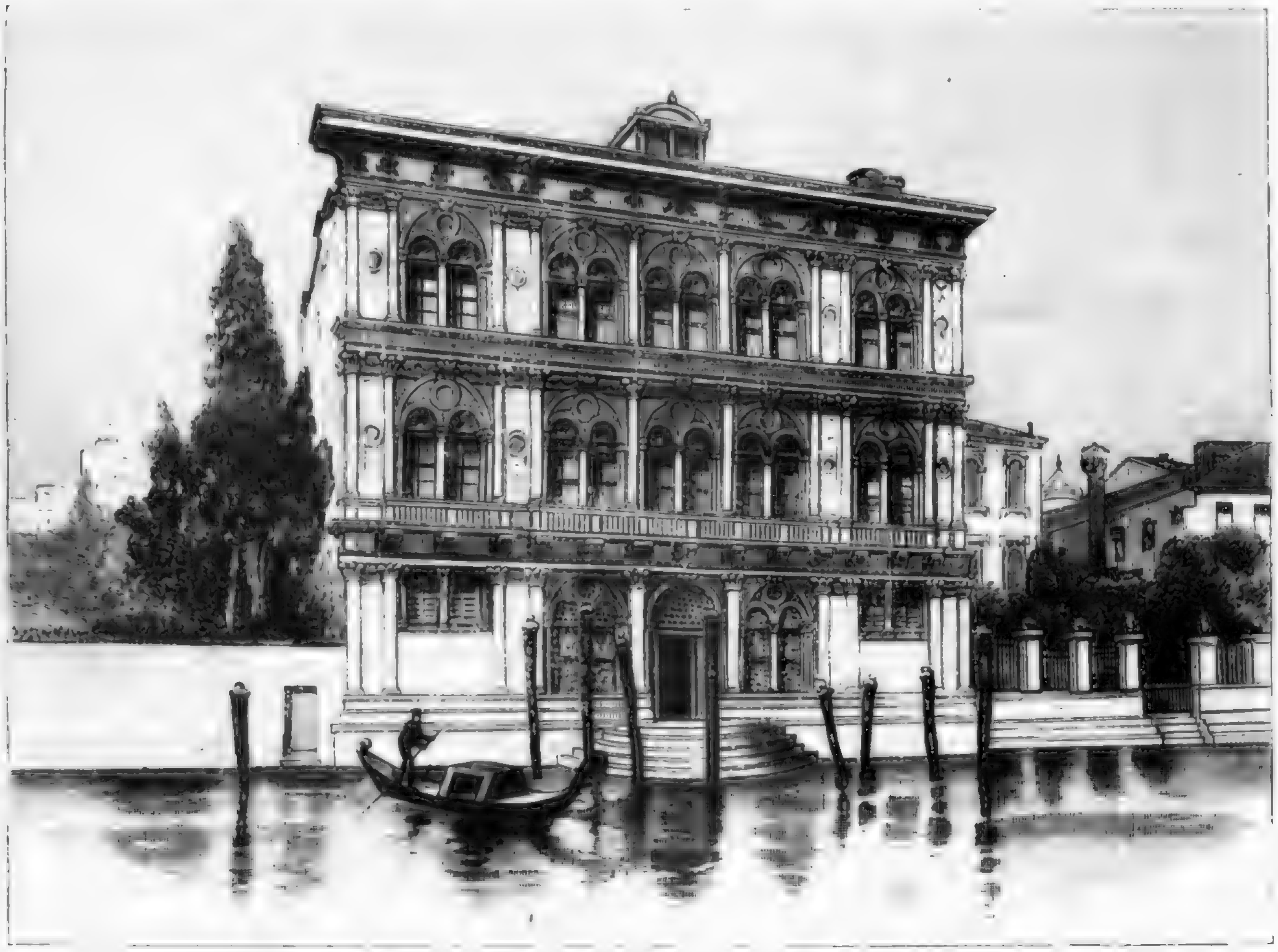
In Giantland

> "Even the most ordinary little trees would be, some 150, some 100 feet, in circumference, and the dandelions and horse-tails by the roadside were nearly the height of a native of Japan. . . . The gutters under the eaves of the houses were deeper than the River Yodo, while were there dust-heaps the height of Mount Higashi. . . . After a while, there came out of the houses a crowd of people, none of them, whether men or women, less than 50 or 60 feet high, while some of the tallest men reached the height of 70 feet, and even the young urchins of nine or ten were at least 20 or 30 feet.

XUM

. . . The crowd gathered round and viewed Wasobiyoë with wonder and amaze. 'What an extraordinarily tiny creature!' they cried, as they picked him up between finger and thumb, and made him stand upon their hands. 'Where do you come from? Are you a human being, or an elf?' To which Wasobiyoë, stretching his legs wide apart, as he stood on the palm of one of them, and, bawling at the top of his voice, made answer."

"At length," wrote Swift, "he ventured to take me behind by the middle between his forefinger and thumb, and brought me within three yards of his eyes, that he might behold my shape more perfectly. . . . I answered as loud as I could in several languages, and he often laid his ear within two yards of me; but all in vain." The King took Gulliver at first sight to be a splacnuck, "an animal in that country very finely shaped, about six feet long." The farmer who finds him takes out his handkerchief, doubles and spreads it on his left hand, "which he placed flat on the ground. I laid myself at full length upon the handkerchief, with the remainder of which he lapped me up, and in this manner carried me home." A sixty-five foot man, a *savant*, picks up Wasobiyoë, "and putting him in his left hand, and covering him up carefully with his right, as a child does who has caught a firefly, carried him off to his house." When Gulliver is exhibited he draws out his hanger and flourishes with it after the manner of fencers in England; and his nurse gives him part of a straw, which he exercises as a pike, having learnt the art in his youth. "If you despise me for my small stature," says the Japanese traveler to the giants, "I will show you what feats can be performed by a fighting man brought up in the school of Yoshitsune!"



VANDRAMINI PALACE, VENICE, WHERE RICHARD WAGNER DIED.—SEE PAGE 564.

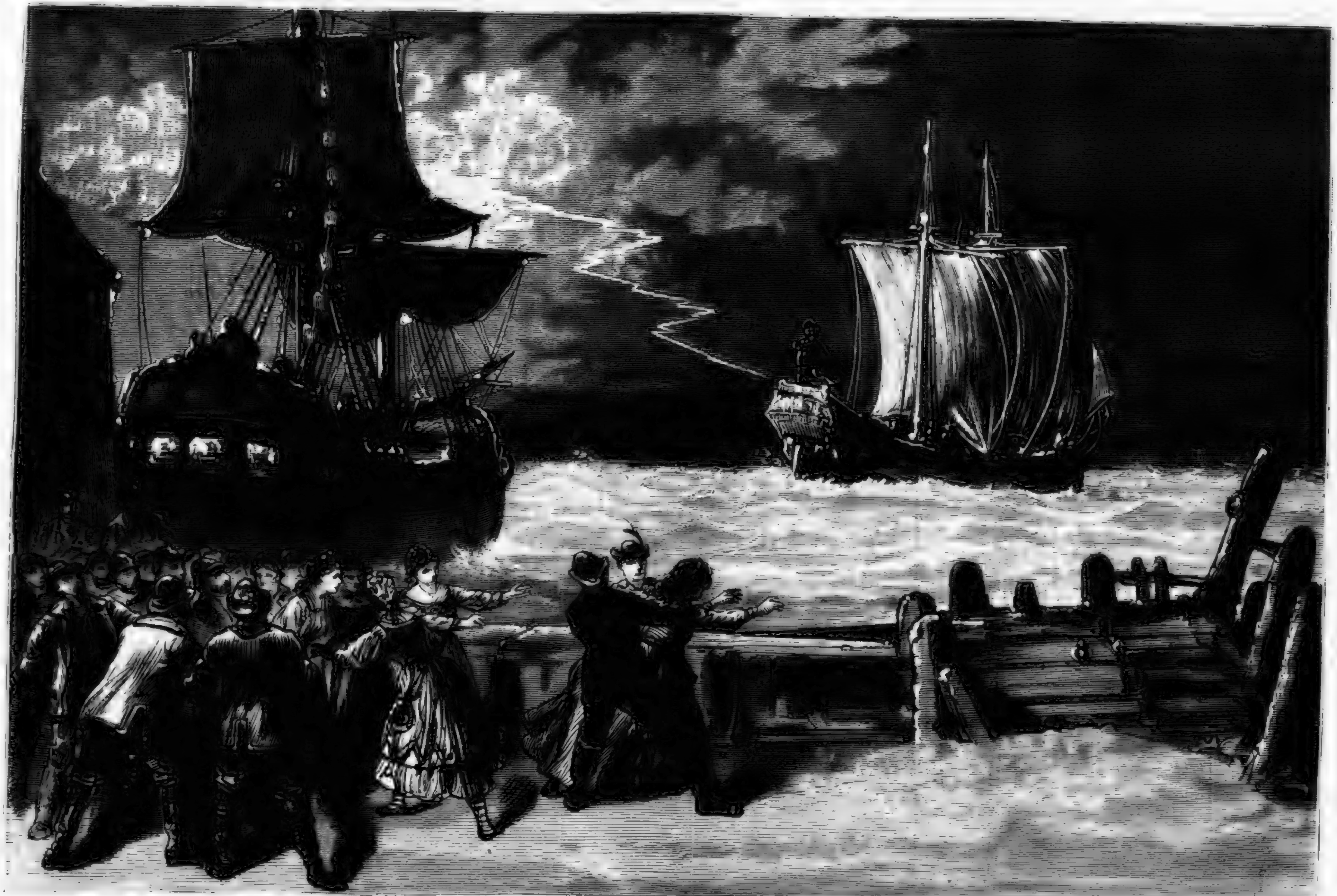
This very strange and attractive Japanese work of imagination is perhaps the most interesting of the modern productions of Japan from a literary point of view, and we are indebted for our first knowledge of it to Mr. Basil Hall Chamberlain, who, although he missed the Struldbrug coincidences, has given an admirable version of part of it in Vol. VII. of the "Transactions" of the very praisworthy Asiatic Society of Japan. That it is well known may be concluded from the fact that the modern novelist, Bakin, "the Inimitable," of Japan, has produced a somewhat similar book, in which he mimicked the title, calling his "Musobiyoë." As may be divined from the extracts here given, the book is satire—and without Swift's savagery—from beginning to end; and the philosophical reflections, for which there is little space here, are novel and striking, nay, mark the genius of a true master; for they are human and world-wide, and anything but Buddhist, or Confucian, or purely Japanese. Whoever the author was—and surely he could be run down—he had a fine invention and a practiced pen.

Gulliver's political and philosophical discussions with the King of Brobdingnag are familiar to most of us. They were received with good-humored disregard; and, finding this so, Gulliver

"one day took the freedom to tell His Majesty that the contempt he discovered toward Europe and the rest of the world did not seem answerable to those excellent qualities of mind that he was master of; that reason did not extend itself with the bulk of the body on the contrary, we observed in our country that the tallest persons were usually the least provided with."

In an identical frame of mind, Wasobiyoë fell a-thinking to himself.

"It would seem as if this foolish country were superior to the rest in nothing but size, tenanted as it is by such empty-headed folk. It is nothing more than a great overgrown asparagus of a



SCENE FROM WAGNER'S OPERA OF "THE FLYING DUTCHMAN."—SEE PAGE 561.

> country! Diminutive as I am, why should I not, with my knowledge of the doctrine of the sages, aspire to the glory of becoming a guide to this nation?"

So he undertakes a course of lectures; but, for all his explanations, they would only talk of him as people do of a pet bird, smiling and saying to each other, "What a queer little creature it is! It performs better than a lapdog, and is more amusing than a parrot, saying such a lot of sentences without being taught them. Mind you take care of it, and don't kill it by overfeeding." His master, the scholar, at last sits upon him quietly, prefacing his very freethinking remarks by saying: "It is not generally discreet or wise to tell little creatures like you the whole truth; yet, as you seem likely to understand me, I will tell you all about it. Listen to me attentively." Gulliver's king, taking him into his hands, and stroking him gently, also shut him up; delivering himself in these words, "My little friend Grildrig," and so forth.

Wasobiyoë's travels also include the Lands of Endless Plenty, of Shams, of Antiquarians and of Paradoxes. We could wish that some scholar would translate and publish the whole work, with notes, giving some account of its author and his labors, and tracking out—there must be native *literati* who could do so—any translation of "Gulliver's Travels" which may have been made into Japanese through the Dutch before its appearance. It is just faintly possible—though we by no means support the theory—that we are in presence of an imitation, but an imitation so independent as to justify once more the paradoxical definition of originality as a transcendent power of assimilation. In that case, "Wasobiyoë" is, in more senses than one, the very antipodes of the impossible stuff in the unreadable performance of the Abbé Desfontaines. Perhaps the author knew Dutch himself; at all events, he makes his hero, who was a native of Nagasaki, and carried on a brisk trade in foreign merchandise, familiar with both Dutch and Chinese. To meet this case, the complete translation for which we are asking should be accompanied by a bibliography of the Dutch editions of "Gulliver's Travels" before, say 1772, which could no doubt be supplied by some learned Leyden doctor.

GRAYFRIARS CHURCHYARD AND ITS STRANGE TENANT.

By Mary Titcomb.

Old Grayfriars Churchyard, so identified with the history of the Scottish martyrs of the seventeenth century, is one of the notable sights of Edinburgh. The *route* thither from Princes Street—where cluster the principal hotels—is so full of places of interest, that, although we started at an early hour, the bright August morning had changed to a smoky afternoon, when we turned from the south end of George IV. Bridge and entered the sombre churchyard. We had taken but a few steps within, when a respectable-looking Scotchman appeared with a huge key in his hand. Supposing him to be the warden of the church, we asked if he would show it to us. He was only the warden of the churchyard, he said; the church was not open except during services. But he courteously told us about the old and the new Grayfriars Churches; how the one was built in 1612, nearly destroyed by fire within the last half-century and restored; how the other was built in 1722, to give more room for worshipers; and that now both formed, as it were, one building.

Walking slowly onward while talking, he asked if we would like to see the old prison of the Covenanters; and then we knew why he carried the ponderous key. This old churchyard, we learned from our guide, was originally the garden of a Franciscan convent, founded about 1436. The convent was burned in 1547, and not being restored, some twenty years later the garden was appropriated by the magistrates of Edinburgh as a burying-ground. Within this inclosure, in 1679, several hundred Covenanters, who had been taken prisoners at the battle of Bothwell Bridge, were confined for five months, without shelter from the weather and supplied only with meagre food.

Having reached the southwest corner of the churchyard, the warden applied his key to a broad, high iron gate, and we entered the walled, but roofless, prison, which witnessed so much misery a little more than two hundred years ago. The old city walls formed the barricade on one side, and ancient tombstones, with almost illegible inscriptions, were planted everywhere in confusing irregularity. Our guide here took a book from his pocket, and, opening to a paragraph, said:

"That will tell you better than I can about the poor prisoners."

It seems such was the rigor with which they were watched, that if one rose from the ground during the night, he was shot at by the guard. Those who survived the merciless treatment of their captors were finally shipped to Barbadoes, but the vessel was wrecked near the Orkney Islands, and, as the captain would not allow them to attempt to reach shore, only a few escaped drowning.

"You will be wanting to see the Martyrs' Monument," said the warden, as he locked behind us the rusty gate. "It is on the other side of the churchyard." Thither we turned, noting on the way many quaint memorials of the dead.

The monument, which was one erected in 1771, in place of the original slab, bore this inscription:

> "From May 27th, 1661, that the most noble Marquis of Argy was beheaded, to the 17th of February, 1688, that Mr. James Renwick suffered, were one way or other murdered about eighteen thousand, of whom were executed at Edinburgh, about one hundred of noblemen, gentlemen, ministers and others, noble martyrs for Jesus Christ. Most of them lie here."

While walking up the long, pebbled pathway that led from the burial-place of these victims of a barbarous persecution to the exit of the churchyard, the warden pointed out a scarcely discernible mound, unmarked by any stone, saying:

"That's the grave of poor Bobby's master—the *dog* is buried just by the gate; *he* died about five years ago."

There was manifestly a story connected with poor Bobby, and our sociable guide needed only a word of encouragement to give all details with an interest that showed his personal feeling.

It was about the year 1859, that a poor man named Gray, who had lived in some obscure part of Edinburgh, died, and was buried in old Grayfriars Churchyard. The morning after the funeral, James Brown, the former curator of the churchyard, found a Scotch terrier lying on the new-made mound. He remembered the dog as having belonged to the dead man, and had noticed his presence during the burial services. But dogs were not allowed in the churchyard, and accordingly Bobby—as he was called—was driven out. The next morning he was there again, and again sent away. But when, on the third morning, which was cold and wet, the faithful animal [illegible] found shivering on the grave, old James was touched with pity, and gave him some food. The terrier seemed to regard this kindly recognition of his devotion as a license to make the churchyard his home, and from that time he never spent a night away from his master's grave. Attempts were often made to keep him within doors in bad weather, but by dismal howls he intimated that he was unhappy, and soon was allowed his own way. No matter how rough the night, nothing could induce him to forsake the spot where his master lay.

Bobby's constant presence in the graveyard attracted much attention, and many inquiries were made about him, and many efforts made to get possession of him; but no coaxing could keep him long away from his chosen home. He won many friends, however, and for several years was regularly fed at a restaurant in Grayfriars Place. No sooner did the dog hear the sound of the castle time-gun at noon than he punctually went for his dinner. From this circumstance the keeper of the restaurant was summoned, after a while, to pay a tax on the terrier. This he expressed himself most willing to do if he could claim the dog; but so long as Bobby refused to attach himself to any one no one could be held responsible for the tax, which the old curator himself would gladly have paid rather than have the faithful creature forcibly ejected from the spot to which he was so devotedly attached. The circumstances were so peculiar that the tax-gatherers concluded that Grayfriars Bobby was exempt from tax.

"Step inside," said the warden, as we neared the gate, "and I will show you Bobby's photograph. He was old and feeble when he died, about five years ago, and I buried him myself."

We purchased the photograph, and left in the warden's hand a substantial recognition of the hour he had spent in entertaining us.

"Just outside," he said, giving us a farewell salute, "you will see the monument that was erected to Bobby's memory by the Baroness Burdett-Coutts."

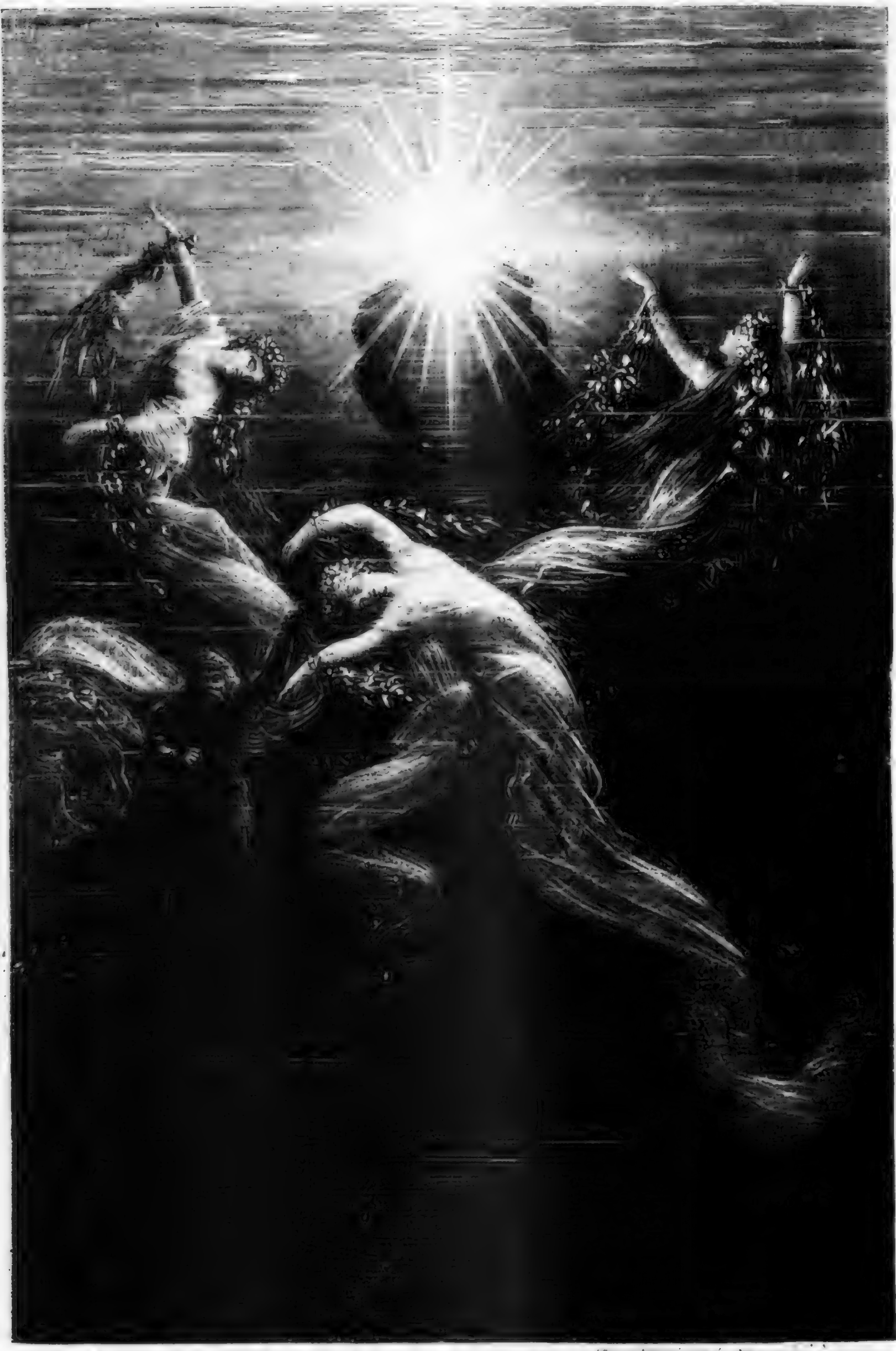
There it was, a few steps from the gate, a stone fountain, with the clear water running freely within reach of a child's hand, and above, as if still keeping guard near the churchyard, where reposed his master's dust, a life-size figure of Grayfriar's Bobby.

THE MOHURRUM AT CONSTANTINOPLE.

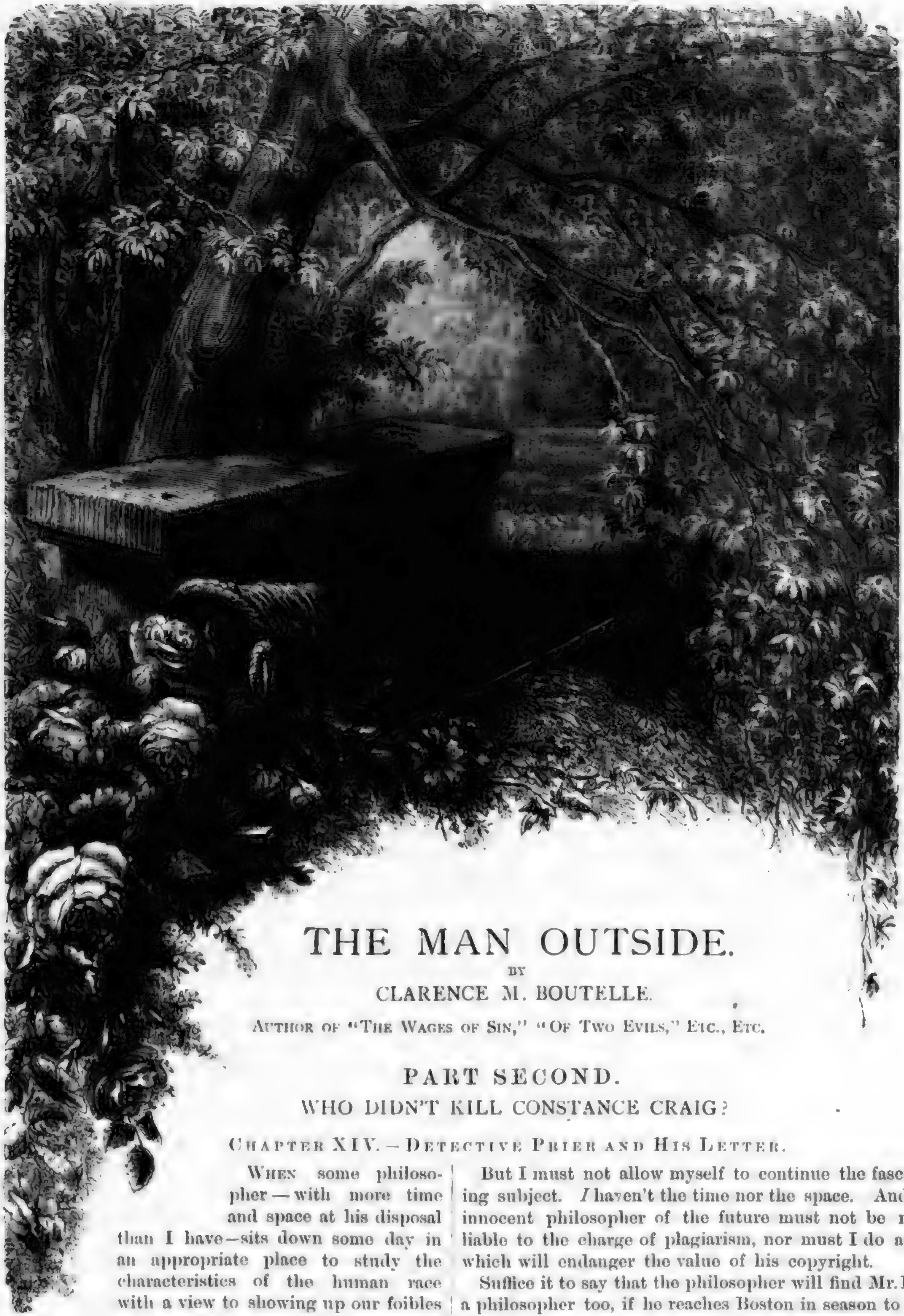
"I went yesterday," says an American tourist, "to see one of the most ghastly ceremonials it has ever been my lot to witness. If any one had described it to me, I should have taken the liberty of doubting his word to a pretty considerable extent. I could not have believed that so barbarous a custom would have been tolerated in this nineteenth century of ours. What I saw was the Persian festival, which is held once a year, in two or three places in the world, to celebrate the anniversary of the murder of Hassan and Hussein, the sons of Ali. My friend and I, with two *hamals* in attendance, went over about half-past six in the evening to a square in Stamboul; and arrived just in time for the commencement of the orgies. They began with a procession of children, dressed in black gowns, singing hymns in praise of Hassan and Hussein to the sound of weird music. The square was guarded all round by Turkish soldiers, who kept a clear space in the centre; the crowd stood behind, and the windows of the square were filled with spectators. The place was all draped in black, thousands of lanterns were hung about, and burning brasiers were stationed at intervals of a few yards. In about ten minutes after our arrival a fearful din of tom-toms arose, and a number of men entered the square, those in the foremost rank carrying brasiers, while those in the centre supported a large canopy, formed of Persian flags and ensigns. Two white horses were next led in. These carried *howdahs* with a child tied on each, to represent the two brothers. Then came other horses, decked out with embroidery stained with blood, and dead bodies lying across their backs. A procession of priests and people then entered, chanting songs of mourning, and these were followed by men, with their bodies bare to their waists, beating themselves with great chains, which they swung over their heads, first on their backs and then on their chests, sobbing and singing the while, the clang of the chains as they all swung together against the flesh being something horrible to hear. Then came the awful part of the whole thing, which made one shudder, and turns my blood cold as I write it. About a hundred men entered the square with their heads shaved, and dressed entirely in white; these formed a huge circle arm-in-arm, all with their faces to the centre of the ring, those on one side shouting 'Hassan!' those on the other 'Hussein!' They gradually worked themselves up into a screaming frenzy, and then, brandishing the huge sabres they carried, they commenced hacking at their bodies and heads till the blood poured down them, and pieces of flesh came off the poor wretches, who, as they became more excited, inflicted ghastly scalp wounds on each other. I never saw such an awful sight, and never wish to again. They went twice round the square, shouting, screaming, and brandishing their sabres, after which such of them as were still able to walk retired from the scene, and the men with chains took their places, with their chests and backs black and bleeding. These marched twice round the square, followed by children singing and chanting. A few prayers were now offered up by the priests, more shouts of 'Hassan!' and 'Hussein!' and then there was a pause, and the people looked as if they were about to disperse. Sickened and horrified by the scene we had witnessed, my friend and I quitted our window-seat, and began a rapid walk to our hotel; but suddenly there were loud shouts from the people, and we saw the entire throng returning. We were the unwilling spectators of a renewal of this fearful carnage, which was only terminated by the death of many of the actors in it, while those who yet lived sank exhausted to the ground, their features in many instances undistinguishable, their white dresses soaked with blood, and yet even in their dying agonies sustained by a mysterious fanaticism which teaches them that through these self-inflicted tortures they go straight to heaven. This account may seem to you exaggerated, but I can assure you it is impossible to convey to you in writing the ghastly realities of the scene I have just described."

The Commonest Names.—The most prevalent surnames in Scotland are Smith—the name of one person in every sixty-nine; MacDonald, one in seventy-eight; Brown, one in eighty-nine; Robertson, one in ninety-one; Campbell, one in ninety-two; Thomson, one in ninety-five; and Stewart, one in ninety-eight. One person in every twelve in Scotland will answer to one or other of these seven names. The Smiths in England and Wales are calculated to be about one in every seventy-three of the population. If we take the three common names of Smith, Jones, and Williams, one person in every twenty-eight will answer to one or other of them.

XUM



THE DAUGHTERS OF THE RHINE AND THEIR GOLDEN TREASURE.—SCENE FROM "THE RHEINGOLD," THE PROLOGUE TO WAGNER'S OPERA OF "THE RING OF THE NIBELUNGEN."—SEE PAGE 564.



THE MAN OUTSIDE.

BY

CLARENCE M. BOUTELLE.

AUTHOR OF "THE WAGES OF SIN," "OF TWO EVILS," ETC., ETC.

PART SECOND.

WHO DIDN'T KILL CONSTANCE CRAIG?

CHAPTER XIV.—DETECTIVE PRIER AND HIS LETTER.

WHEN some philosopher—with more time and space at his disposal than I have—sits down some day in an appropriate place to study the characteristics of the human race with a view to showing up our foibles and peculiarities—what do you think he will select as an appropriate place for his work of observation? Where do you think he will go?

To Church? To Congress? To Wall Street? To Sing Sing? To the Skating Rink?

I don't think he will.

I think he will take up his position in some convenient post-office. I think that he will observe——

But I must not allow myself to continue the fascinating subject. *I* haven't the time nor the space. And the innocent philosopher of the future must not be made liable to the charge of plagiarism, nor must I do aught which will endanger the value of his copyright.

Suffice it to say that the philosopher will find Mr. Prier a philosopher too, if he reaches Boston in season to find Mr. Prier at all, and an eminently wise and sensible philosopher too—a statement which I regret to say cannot be truthfully made of all philosophers. Observing Mr. Prier, he will see that when he gets a letter he opens it and reads it—instead of carrying it home unopened; he will see him look within to find out where it came from—instead of wasting some minutes of his short life in studying an illegible postmark; he will notice that he looks at the signature to see who wrote it, instead of spending his nervous force on a critical analysis of the characteristics of the address; he will not fail to note the fact that Prier *reads* to find out what his correspondent has to say, instead of squandering breath in wondering "What on earth can he have written about?" Should the pleased philosopher find Prier so different from the average person that he follows him home to study him more at his leisure, he will find that he *keeps his letters* instead of destroying them. So much for Prier and the possible philosopher.

Now for the story—and for facts.

Prier went home to Boston the day after Senn's acquittal. Prier wanted to think. Envious outsiders say that the Bostonians claim that their very atmosphere stimulates thought. Perhaps it does. At any rate, Prier went home *to think!*

He had an idea that he had something to think about. His mail next morning gave him something more about which to exercise his thought!

A letter?

Yes, a letter that he opened and read—and then took home to read again.

A letter that set him half wild with a hopeless study over a postmark which was, if possible, less clear than usual—the study being caused by the fact that the letter had neither date nor heading.

A letter which almost maddened him as he tried to decide what manner of individual had written it—for it had no signature.

A letter which he read and re-read.

Let us read it as well:

> "DEER SUR: i want you to ask 4 questions which were sugested to me by the trial at boomville. Pleese ask some good preecher if he ever knew a man to help another out of a awful scrape because he was himself a wicked Sinner with Remorse. ask mister aldrich where he spent the sunday before the Murder. ask miss web how long she was away from Home. ask the man you see in your mirror whether he ever saw a Grate Detective who was a Grate Fool."

I have already stated enough to make it evident that Mr. Prier was compelled to treat this letter in a manner quite unusual. It is needless to remind the reader that many men habitually destroy their letters. Still other men—and not a few—would destroy letters which were uncomplimentary; and they would be particularly swift to do so if the allusions were aimed at those things in which they felt they ought to have won compliments; picture to yourself the state of mind of the lawyer whose legal lore is called in question—the physician whose skill in medicine is doubted—the clergyman whose devoted goodness is held up to scorn. Prier's letter was cruel, but Prier was wise. From duns to comic valentines, letters, like fruit, are best when preserved. If one man thinks another a "Grate Fool," the second man goes far toward establishing the truth of the statement if he destroys the evidence of the first man's opinion. I take pleasure in saying that Mr. Prier kept that letter.

If he hadn't—if —

But he did.

After which——

Prier went back to Boomville again—intent on taking a look at the friends he had there, and other individuals —intent on taking a little trip down to Blankford, with possibly a ride into the country for three or four miles from there—intent on asking a few persons a few questions. It may be that Prier found the conditions unfavorable—"the environment inauspicious"—in highly cultured Boston, and had determined to go back to the smaller, duller, quieter and more humdrum little city in Maine—*to think!*

What kind of a man was Prier? I want to assure you, once for all, that he was a remarkably good and honest man, a foe of wickedness, a hater of shams, a worker in earnest for right and justice. But he believed that it was sometimes expedient to use fire in fighting a certain individual—or any of his adherents—and he tried to make his efforts in that direction natural and unassuming.

So he took a pleasure trip to Boomville.

That is, he tooks pains to assure his acquaintances in Boomville that it was a pleasure trip. He felt, undoubtedly, that there might be some wonder at such a course on his part, for early Winter was not the usual harvest time for those Boomvillians who took boarders for a living. But to those who inquired he explained very fully; he was worn out with business; his nervous system had been severely shocked by the results of the trial; he must have rest and quiet, and a place where he could have fresh air—plain food—and opportunity to—to—(he always finished by expressively touching his forehead)—so I presume "*to think*" is the proper conclusion. The somewhat prevalent idea that detectives do nothing but hunt desperate criminals, revolver-in-hand, much as they would hunt wild animals, is either incorrect or else Mr. Prier was an exception to the usual sort of men in that profession.

Mr. Prier did not tell the gentlemen by whom he was employed in Boston that he was going on a pleasure trip, however, nor did he ask for a vacation; he simply said two words to them in the office—"Boomville," which meant his post-office address, and "Business," which meant *business.* As he continued to draw his salary regularly, and as he didn't hesitate to render his expense account quite frequently, there is good reason for thinking that he told the truth in Boston, but used "fire" against the unpleasant individual afore-mentioned, when once in Boomville. The Detective Agency was satisfied: Prier was one of their best men; he had earned them much more money than his salary and expenses had ever amounted to; the men at its head *sent* other men—Prier usually simply *went;* if the men in control took time to think of the probable character of Prier's work and the possible results which might come from it, their thoughts went out to a certain ten thousand dollars reward which had been privately offered for the conviction of the murderer of Mrs. Constance Craig; they would recall Prier, of course, if other business elsewhere required the attention of more than an ordinary man; as I have already said, the Detective Agency was satisfied; we ought to be.

Dear reader, what would *you* have done if you had received such a letter as Prier did? Some men would have refused to act on such impertinent advice at all. Would you? Prier didn't refuse.

Some men would have gone to Miss Webb, Mr. Aldrich and the nearest clergyman, and have bluntly put the questions suggested. Would that have been your plan? It wasn't Prier's. I think he did ask the gentleman in his mirror some very prompt and direct questions, but he was on remarkably familiar terms with *him.* As for the rest, he took the work in hand with leisure care. Poor Prier! How he chafed and fretted under the enforced slowness of his work! And yet—Constance Craig had been in her grave for ten years; it was time for him to have learned patience.

Prier's first hard work after he had established himself in the hotel at Boomville had been the making of his presence there seem natural; that took time; he devoted some weeks to it; he called here, conversed there, attended church regularly, developed a deep interest in social affairs, kept the early hours which his character as a wornout man in search of rest made fitting, and was, in short, as "mild a mannered man" as had ever agreed to incur his own blame if he failed to hang somebody.

The second hard job which the detective undertook was the study of his letter. He wished to know more than appeared on the surface; he wished to "read between the lines"; he desired to penetrate the writer's motive, to ascertain what the writer knew or suspected, and to find out who had written and sent the letter. He resolved to make an analysis of the letter, a careful and critical study of it. So, one morning, he sat down in his well-warmed room at the hotel, drew paper and pen and ink across the table to him, and wrote as follows:

"ANALYSIS OF A CERTAIN LETTER, RECEIVED AT BOSTON, MASS., NOVEMBER 26TH, 1870. (SATURDAY.)

"*I. Copy of the letter:*

"DEER SUR: i want you to ask 4 questions which were sugested to me by the trial at boomville. Pleese ask some good preecher if he ever knew a man to help another out of a awful scrape because he was himself a wicked Sinner with Remorse. ask mister aldrich where he spent the sunday before the Murder. ask miss web how long she was away from Home. ask the man you see in your mirror whether he ever saw a Great Detective who was a Grate Fool.'

"*II. When was the letter written?* (No date; postmark illegible.)

"The trial of Gilbert Senn for the murder of Constance Craig took place on Thursday, November 24th. I reached Boston on Friday. I received the letter on Saturday morning.

"1. The letter was not written earlier than Thursday evening.

"2. It was not written later than Saturday morning.

"3. If it was written Thursday evening, it was written in Boomville.

"4. If it was written Saturday morning, it was written in Boston.

"5. The exact *time* depends upon the *place*.

"*III. Where was the letter written?* (Postmark illegible.)

"1. It was written where the result of the trial was known.

"2. The telegraph carried the news everywhere. But

"3. It was written by some one who know the details of the evidence.

"4. There is no daily paper published in Boomville.

"5. The details of the trial were known, outside of Boomville, only through information carried by some one from Boomville.

"6. The letter was *probably* written *in Boomville*.

"7. It was *probably* written Friday morning.

"*IV. Who wrote the letter?*

"1. It has no signature.

"2. The handwriting is probably disguised.

"3. There is no certainty as to the sex of the writer.

"4. The *motive* may help determine the person who wrote the letter.

"*V. Why was the letter written?*

"1. Aldrich saved Senn.

"(*a*) Is he the sinner who is troubled with remorse?

"(*b*) He went down to Blankford on Saturday and came back on Monday; *where did he spend Sunday?*

"2. Miss Webb *got home* Tuesday morning.

"(*a*) It was supposed she went away Monday.

"(*b*) Her evidence nowhere says that she did.

"(*c*) She never told me that she went away on Monday.

"(*d*) *When did she leave home?*

"3. The inference to be drawn is that Miss Webb and Mr. Aldrich can tell more than they have told.

"(*a*) Suppose Miss Webb was absent two nights. And –

"(*b*) Suppose Aldrich cannot account for Sunday.

"(*c*) It may mean Senn's guilt. Or—

"(*d*) It may mean Aldrich's.

"4. I followed the evidence toward Senn's guilt well enough and skillfully enough to deserve much credit.

"(*a*) No person wrote such a letter under the influence of a vague suspicion.

"(*b*) No one wrote the letter with intention that I should pause in doubt between the two.

"(*c*) Therefore, if the letter means anything, it means Aldrich.

"(*d*) And if it is Aldrich who is guilty, I cheerfully agree with the kind friend who has called me a great fool.

"5. Is any particular clergyman meant by the reference to 'some good preecher'?

"(*a*) Where would the man be found who would be most likely to know something of interest—in Boomville, or in Boston? Where the letter was written, or elsewhere?

"*VI. Did an ignorant person or an educated one write the letter?*

"1. The handwriting:

"(*a*) It is probably disguised.

"(*b*) The sex of the writer cannot be determined.

"2. The spelling:

"(*a*) The following words are incorrectly spelled: 'Dear,' 'sir,' 'suggested,' 'please,' 'preacher,' 'Webb,' 'great.'

"(*b*) Of these, there are three in which the error is exactly the same; *ee* for *ea*. A person who had incorrectly written that combination once, *purposely*, would be likely to do so again.

"(*c*) The following words, which are spelled correctly, might give trouble to an actual poor speller: 'Questions,' 'which,' 'some,' 'knew,' 'another,' 'awful,' 'because,' 'wicked,' 'sinner,' 'remorse,' 'Sunday,' 'mirror,' 'whether,' 'detective.'

"3. The use of capital letters:

"(*a*) Capital letters are incorrectly omitted from all places *but one* in which they should have been used. This does not seem a natural result, but rather the fruit of care and effort.

"(*b*) Every instance in which a capital letter is incorrectly used shows it at the *beginning of an important word*. An ignorant person might have commenced *any word* with a capital letter.

"4. The letter is quite well punctuated.

"(*a*) An educated person may punctuate poorly, either intentionally or through carelessness. But –

"(*b*) An ignorant person rarely punctuates well.

"5. The letter is brief, definite, pointed.

"*VII. Conclusion:*

"1. The letter was probably written in Boomville;

"2. On Thursday evening, November 24th, 1870, or early the next morning;

"3. By a well-educated person;

"4. Who desired to appear ignorant;

"5. With the intention of turning my attention and suspicion from Gilbert Senn to Walter Aldrich;

"6. Because the writer hates, or fears, or distrusts, or desires to obtain power over him."

A crude analysis, no doubt, for Prier was liable to be mistaken and illogical, smart and shrewd though he was. But I feel almost certain that had the writer known the sort of treatment the letter would receive at Prier's hands—had Prier's character, his many-sided character, been fully understood—the letter would have been somewhat different. It is a risky experiment to attempt—this using of a man's professional tools and methods by a mere amateur.

A crude analysis, no doubt, but when a man has done his earnest, honest *best*, he is entitled to the feeling of satisfaction which is so natural and usual.

Prier was well satisfied with his morning's work.

He wrote in his diary: "December 30th, 1870. Analyzed letter; a long step toward solution of mystery."

Then he smoked a cigar or two, leisurely and reflectively.

Afterward he walked.

Later he dined.

And after dinner he read the news which appeared in the *Boomville Weekly News-Express*.

Weekly! Prier sat down lazily, pencil-in-hand, and thoughtlessly made it Weakly—in name!

News! It was most of it some days old. The detective had read almost all of it, in substance, in the *Journal*, the *Herald*, and the *Transcript*, papers which were sent him regularly from Boston.

Express! A slow one surely.

XUM

Then Prier nodded over the locals, and, finally, went to sleep with one of them half read:

"Mrs. Gilbert Senn, daughter of our late fellow-townsman, Donald Barron Esq., has shown great energy and ability in her management and settlement of the somewhat involved affairs of the estate of her deceased father. The sudden death of the old gentleman, followed by the trial of her husband and the exposure of certain facts in his past history which will render it inadvisable for her to live with him, have seriously undermined her once vigorous health. She has decided upon a somewhat extended trip through Europe, and will go there at once; she sails on Monday next. She will – "

And just here Prier shut his eyes and actually snored. So he didn't read the remainder of the bit of news in the *News-Express:*

" be accompanied by the young lady who has so long been her nearest and best friend, the popular musician and artist, Miss Lurline Bannottie."

Prier slept a long time. It was quite dark when he awoke. The fire was out. The room was very cold—as was also the detective.

He lighted the gas.

He put fuel in his stove.

"So *my enemy* is going to Europe, is she?" he said to himself, picking up the paper and remembering what he had read: "that may possibly make my work here easier."

He crushed the paper into a shapeless wad. He laid it beneath the kindling wood in his stove. He lighted a match, and touched to it.

Looking up, he caught sight of his reflection in the looking-glass.

He shook his finger solemnly at his counterfeit, while the fire climbed higher and higher over the fuel he had placed for it.

"*Did you ever know a great detective who was a great fool?*" he asked.

CHAPTER XV.

PRIER CONSULTS REV. JOHN KANE.

There had been a heavy fall of snow during the night. Mr. Prier was out very early in the morning, earlier than most of the residents of Boomville, much earlier than those who would shovel off the walks and make pedestrianism easier a couple of hours or so later. Mr. Prier pushed his way energetically through the snow. He enjoyed it. The slight physical exercise required, slight to one so full of vigor as he was, stimulated his brain to activity. Out in the open air, pushing his way through the deep-piled drifts, filling his lungs with the rich air—cold, dense, and full of the spicy strength of the pine woods through which it had roared and raved the whole night long—he could think, think, think. And you will not forget that this gentleman had come up from Boston to Boomville on purpose to think; you will remember that Mrs. Constance Craig was his half-sister—that he had loved her—and that for ten years her death had been the one unexplained mystery of all the puzzles and problems to which he had given his time and his energies.

He had made up his mind to call upon Rev. John Kane, and have a conversation with him. He had not yet made up his mind what he meant to say, or what he desired to have the clergyman say; he had not determined just what he hoped to find out—indeed he was not certain that he had any hopes at all in the matter; he did not know why he had selected Rev. John Kane rather than some other of the several spiritual teachers in charge of the several churches in Boomville. He had resolved to see a clergyman, and ask him some questions of a general nature—because the most insulting letter he had ever received had suggested it; he was going to let circumstances determine just what should be said and done, just what sought and found—because he was in the dark, decidedly in the dark, and this was to be an experiment in the direction of light; he was going to see Rev. John Kane—because his impulses led him in that direction—such impulses as had led him to walk up and down in front of Donald Barron's house the night the old man died.

He had reasoned about the matter, of course. How could he help it? Knowing, as he did, that there are times when reason is a delusion and a snare, times when one will find that way best down which blind instinct silently and persistently points, times when air and woods and waters—and the stars in the sky—all seem whispering a hint of a lesson of unreasoning and supernatural directness, a hint of a lesson which can never go beyond a hint while man is hindered and hampered by the possession of an instrumentality so gross as the human body for the execution of his desires and purposes, and so material as a brain for the knowledge of them—knowing all this, he had, nevertheless, reasoned about the matter.

On the one hand was the fact that Rev. John Kane had married Elsie Barron to Gilbert Senn, and that so far as that event was connected—nearly or remotely—with the solution of the problem so near his heart, Rev. John Kane was the man who must be meant by the letter, if any particular Boomville clergyman was meant at all. Rev. John Kane had buried Donald Barron, too, so Mr. Prier had learned. (You will remember that the relations existing between the detective and the daughter of Donald Barron had rendered it inexpedient for the former gentleman to attend the funeral of the latter.) Walter Aldrich was a regular attendant at the church in charge of Rev. John Kane.

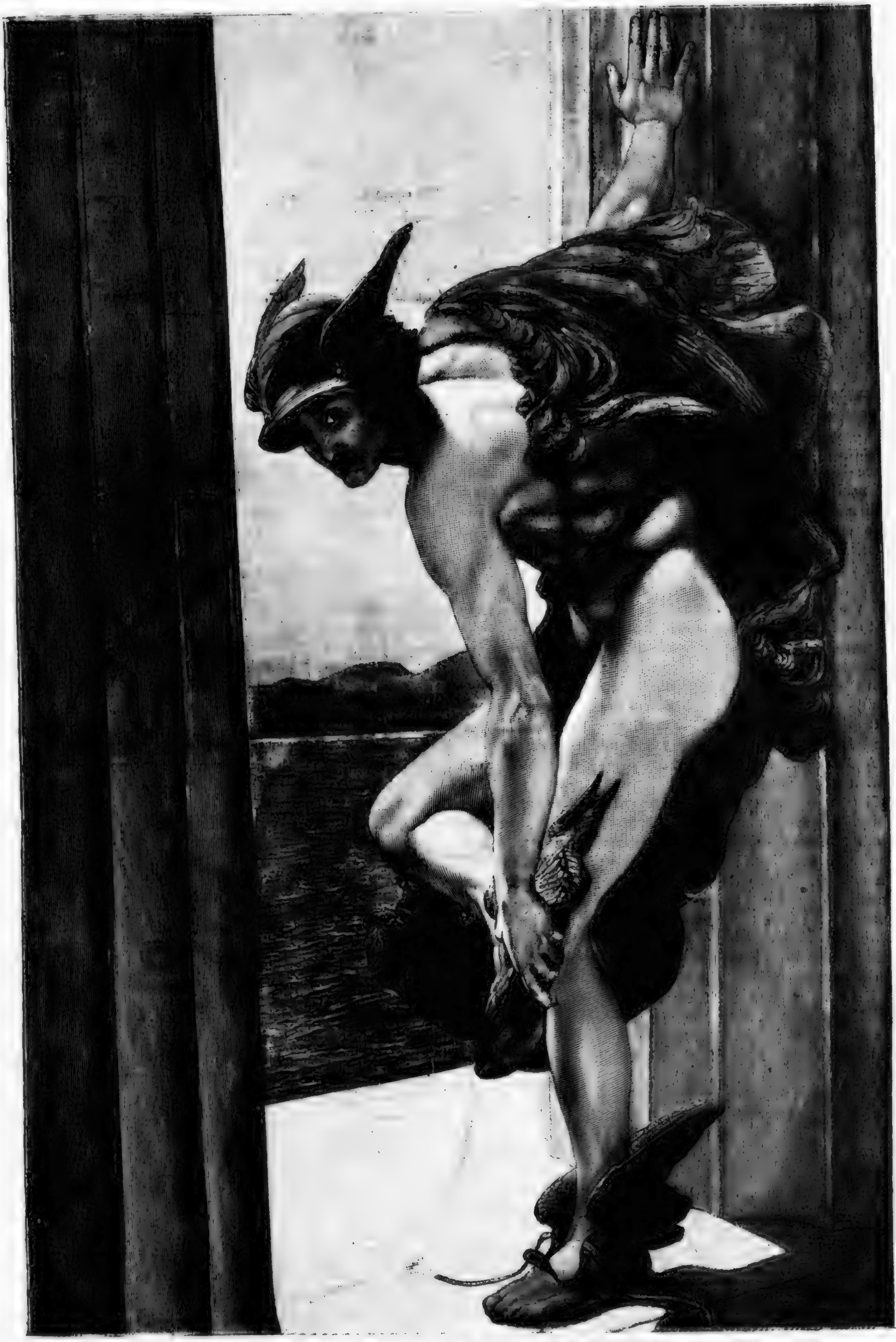
And so far, of course, the argument was clearly in favor of an application to Mr. Kane—a request that he would give his opinion on the subject of aid, difficulties, sinners and remorse.

On the other side of the question was the fact that Gilbert Senn had been a regular attendant at another church; the fact that Rev. John Kane had been a resident of Boomville for less than a year; and the fact that the clergyman who had confirmed Elsie Barron in her young girlhood—who had baptized her in her infancy—who had performed the last rites over her mother—who had officiated when Donald Barron had taken upon himself the solemn vows and obligations of matrimony—was lying under the snows and sods, not far from the dead Barrons, and that his lips of wisdom and experience were closed for ever.

John Kane, young and more thoroughly versed in the theories of theology than in the practical experiences of life, had taken the place of the old, gray-haired wise and experienced man who had laid his burden down to go to his reward. John Kane had lived in Boomville less than a year. Why should Prier consult John Kane? Why had the writer of the anonymous letter put it into the mind of the detective to do so, unless, indeed, it was his purpose to still more puzzle and annoy him, and to throw Justice further from the track leading knowledgeward? What did John Kane know which was worth Prier's time to learn?

And yet—Prier's impulses led him toward Mr. Kane, and he had determined to follow his impulses.

Mr. J. B. Prier would, in the humble opinion of the



"HERMES."—FROM THE PAINTING BY W. B. RICHMOND IN THE GROSVENOR GALLERY.

writer, have made an excellent general. His foes would likely have found his fortifications good, and his defense vigorous—if they ever found him other than the aggressive attacking party. In a charge, I can fancy his actions almost sublime; the men he led would never have been led in retreat—and I think they would scarcely have left Prier, to engage in retreat themselves—so that there is no doubt in my mind that he would have made an excellent leader—that a forlorn hope, under his direction, would have ceased to be forlorn, and that the hope would have blossomed under the sun of courage, reddened and ripened under the rain of blood, and have enriched him with the glorious fruition of victory.

That snowy morning, Mr. Prier manifested one of the important qualifications of a soldier and a leader—the virtue of caution. It is undoubtedly true that the *reconnaissance* is a necessity—though it be a disagreeable one to the man who likes action and conflict. And Mr. Prier was about to walk by Rev. John Kane's house, in order to look over the belongings and surroundings of the man he intended to see, hoping to read something of his personality from the appearance of the dwelling in which he lived. Do you know that a man's temperament and character can be read in his front yard as well as in his face—or better? The fence behind which he intrenches himself from the outside world; the gate which he opens when he goes to work, or shuts when he goes in to rest; the door he passes, whether out for his part in the world's battle, or in to the domesticity which is unknown outside the family circle; the scars his feet, slow or hurrying, have left on walk, on piazza, and on threshold; all these speak louder than words—and more truthfully—to one who has the key to the tales they tell. The expression of a window may be a smile—or a sullen glare; a sneer—or an invitation. The windows of a house are not less expressive than the windows of the soul—looking out from the human face—and, unlike the latter, they cannot lie. Did you know all this? Do you understand me? Prier knew and understood.

And Prier was going to take a look at the house in which Kane lived.

Rev. John Kane was an instance of "muscular Christianity." His chest was broad; his muscles were firm; his hand and eyes were steady. He was a man who could row, and shoot, and drive, and who enjoyed exercising his powers. He had a smile on his face, and kind words on his lips, almost always. His calling and his duty had not made him morose and sour. The message he had to give regarding another and a better world had not blinded his eyes to the brightness of this one. Strong, cheerful, happy, he was a grand example in his life—his deeds speaking louder than his words of the goodness of right living. Rev. John Kane was a bachelor; there were those who said it was not the fault of the young ladies of his congregation; I am inclined to think that those who said it were right.

Mr. Prier found Mr. Kane clearing off his walks. He was cutting down the densely packed drifts with a definite mathematical exactness which charmed the detective. He was throwing the snow away with long, vigorous swings of the arms which were good to see. There was no need to give more than a glance at such a man's house and windows, gate and fences; a Man lived there, an open-hearted, loyal, earnest *Man.*

"I wish you'd let me help you," said Prier, heartily.

Mr. Kane laughed.

"I couldn't think of that," he said. "I suppose I am a very selfish fellow, but I enjoy this too well to give up any of it to another."

And Mr. Prier, perhaps carried away by the fresh and breezy joyousness of the other, laughed with him.

"Come in and take breakfast with me," said Mr. Kane, cordially. "My housekeeper has gone away for a week on a visit to her daughter, and I am all alone, and keeping bachelor's hall in very fact. You shall see how well I can cook a steak, how well I can make a cup of coffee, and some of the lightest and whitest bread you ever ate. It will be a great improvement over the hotel, I can assure you."

"I should hope so," said Mr. Prier, opening the gate and walking briskly into the yard; "I should hope so. The hotel is well enough, of course, considering the character of their custom and the wide variety of tastes which they are called upon to serve. I cannot complain of the quality, the quantity, the variety, or the way in which the food is served; but the cooking, good though it is, has a terrible sameness about it; the cook is evidently a person of age and experience—a person who learned his work so thoroughly in his young days as to have forgotten that progress and improvement have a place in every calling in life. His cooking has no individuality, no personality. He does not cook because he loves it, nor yet because he loves those for whom he cooks. No dishes come to me which are delicate compliments to my taste, not one which is an expression of a genuine and honest pride on the part of its inventor. I studied cookery once, before I became a detective, and, of course, I am deeply interested in it. Thank you, Mr. Kane, I will breakfast with you."

It may justly be a question, and a matter for wonder, whether Mr. Prier had forgotten his usual caution that morning, or whether he was showing himself the sort of "talkative detective" which some others had found him.

"You are still studying the case of Constance Craig from a Boomville standpoint, I suppose?" asked the clergyman, suddenly, as they sat down to breakfast.

Mr. Prier was taken by surprise, and almost thrown off his guard. He answered pleasantly, though, and promptly enough to satisfy any one not remarkably acute and observing—perhaps any one not actually suspicious.

"I thought it was understood that I came up here for rest and pleasure," he said.

"It is so understood," replied John Kane, quietly; "but of course you cannot help thinking more or less about this matter."

Prier smiled.

"Certainly not. No more than you could help pondering over sin and its remedy—goodness and the means of increasing it—though you were enjoying a vacation-time of rest and freedom."

"So I thought. But *I* never take any vacations; I never need any; I am so strong and robust and hearty that ——"

"You are very fortunate," interrupted Prier; "very fortunate indeed. I should think you would find your duties taxing to even your powers. I cannot help comparing your calling with mine. It is important enough to find where stolen property has gone, and to restore it to its rightful owners; how much more important to find sinners who are lost and bring them back to Him to whom they should belong in every sense of the word. To hunt out crime, and to punish it, is important enough; but who can compare it with the work of convincing crime of its iniquity and humanity of its needs, and pointing out the way of escaping the penalties. My calling is necessary, but a few years will show that my successes and my failures have alike amounted to little;

while you—you build for Eternity, or fail everlastingly." Kane bowed gravely.

"I do my best. Great as is the responsibility, I do not allow it to wreck my pleasant life or crush me with worry. But really, Mr. Prier, have you not mistaken your calling?"

Prier shook his head.

"I think not. It is too late to change now, even if I had. While Constance Craig's death remains a mystery I shall give no work in any other direction than the study of criminals and their ways, and of crime and its conditions. I shall give my work to other cases than that of my half-sister only because I must have the money I earn in studying them in order that I may adequately and successfully (God grant it!) study hers. I shall accept only such cases as seem to give promise of helping me to learn that which will be an aid in that one direction later. But—to answer your question in a way you probably did not expect, I will tell you something I seldom mention: I *did* think of your calling as my possible employment once; I took a very thorough course in theology once, some time before I became a detective, and——"

"Why didn't you make use of your education? Why did you go so fully to the other extreme of work?" asked Mr. Kane, in undisguised astonishment.

"Well, to tell the truth, I was almost too liberal in my views. I didn't believe all that seemed necessary. I had an idea that mankind was better than it is. But did I go to the other extreme of the work of the world?"

"Pardon me," said Mr. Kane; "I did not intend to hurt your feelings. But you certainly undertook a work which was well calculated to impress you with the depravity of man, did you not?"

"Indeed I did—God knows I did," said Prier.

"And have, perhaps, changed your views?"

"Indeed I have—radically."

"I remember what you said to me when Elsie Barron became Gilbert Senn's wife. I did not understand it then, for I little guessed the crime you were so soon to lay at his door."

"No," said the detective; "you little guessed that. One little guesses a detective's purposes until he reveals them. We go, in the most natural manner imaginable, and often on the personal invitation of those with whom it is to our interest to talk, wherever and—usually—whenever we please. We talk much—and tell little. We listen little—and learn much. But what was it I said which so impressed you, though I have myself forgotten it?"

"That you believed in eternal punishment! You meant it, did you not? You believe it, I presume?"

"I meant it. I believe it," said Prier, solemnly.

"And when did you first come to believe it?" queried Kane.

Prier bowed his head upon his hands, leaning heavily with his elbows on the breakfast-table.

"Oh, my God!" he cried, in agony of voice, while the tears ran through his fingers, and he shook with his emotion as an ague-cursed man might have done; "I—I learned that when I looked down upon the dead face of Constance, the sweet face of the sister I had loved so since her earliest babyhood, slain in her youth by the coward hands of secrecy; murdered—*murdered*—MURDERED!"

"Ah," said the clergyman, in a strangely hushed voice. And then there was silence, silence save as it was broken by the sobs and groans of Prier, for many minutes.

Prier looked up at last. His tears were gone. His eyes looked as though they had never known what tears were, nor would ever know. His lips smiled, actually smiled, but I pity the one who ever has to face that smile when Prier's hand has found the way to Prier's purpose.

"I—I—you needn't tell me again that you are in Boomville for pleasure," said Mr. Kane, quietly, after he had looked Mr. Prier in the face for a half-dozen seconds; "for it wouldn't be true. You are here on business, and——"

"And you needn't tell any one else," answered Prier, pointedly.

"Certainly not," said John Kane, reaching his hand across the table, and grasping that of the detective; "certainly not. By-the-way, where is Gilbert Senn?"

"I don't know."

"You don't know?"

"No. He left town during my absence in Boston, I think, and I have not learned where he went."

"Cannot you find out?"

"I haven't tried."

"Are you not afraid of losing him if you delay?"

"It makes no difference to me where he goes. I am done with him."

"Are you? Of course you are done with him so far as the law goes, but do you intend to let that be the end with a man as guilty as he is? True, the jury acquitted him. True, the lawyer cleared him. True, the judge gave a charge which rendered only one verdict possible. True, under our laws, he cannot again be tried upon this charge. True, he cannot be hanged, but——"

"I'll be blamed if I don't hang some one," interrupted Prier.

Kane smiled.

"I think you will hang no one for this. But I cannot understand how you can let Senn go in peace. I should suppose you would follow him wherever he went, keeping those about him fully informed of his past, guarding innocence and virtue against his wiles and wickedness, making another murder impossible, and——"

"And making his life one long torture! Driving him down when he should be helped and elevated. Making crime a necessity to him. Making his place outside the fields of usefulness and honest labor, outside the circle of trust, outside the pale of faith and hope, in the world—in the flesh—but beyond the power of the Providence of God. Rev. John Kane, I am a detective—you are a clergyman; it is my business to bring crime to justice—yours to temper justice with hope and point the path to mercy. Why are you so much harder on this man than I am?"

"Perhaps I am not, for "

"I beg your pardon then," said Prier. "Perhaps I did speak hastily."

"My pardon is granted. You undoubtedly spoke justly. I was trying to put myself in your place, to speak as I fancied you must think, to look upon the matter from the standpoint of an average humanity—an unregenerated humanity, if you please."

"Ah! I see. And I beg your pardon again."

"There is nothing to pardon. But let me go back to where I was when you interrupted me. Gilbert Senn has gone?"

"Yes."

"You do not know where?"

"No."

"And yet you are his enemy?"

"No, I am not. I am his friend. Read that. It is a copy of a paper I gave him—not personally, but by mail

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—between the time of the verdict and my going to Boston."

The clergyman opened the paper, and read the lines it contained, while the look of amazement deepened and deepened on his face.

I think we are entitled to read the lines also, and I transcribe them here:

"BOOMVILLE, MAINE, *November 24th*, 1870.

"TO WHOM IT MAY CONCERN: I take pleasure in saying that I am well acquainted with Mr. Gilbert Senn, the bearer of this document, and that I believe him to be energetic, able and honest. I have seen him in danger, and I know him to be brave. I have seen him in difficulty, and I know him to be alert and self-reliant. I believe he would be loyal to every trust, silent, discreet and self-sacrificing beyond the needs of ordinary honor.

"I take the greater pleasure in making these statements because of the relations which have recently existed between us, and which might make my present attitude toward him, and my present opinion of him, misunderstood. Very truly and sincerely,

"J. B. PRIER."

"That is astounding," said Mr. Kane, as he handed back the paper.

"I think so," said Mr. Prier.

"Unprecedented."

"I suppose so."

"No one else in all Boomville would have given him such a paper."

"I fear that is true."

"And if he finds work anywhere, he will obtain it on the strength of that document."

"I hope he will."

"But, Mr. Prier, Gilbert Senn is guilty."

"No, Gilbert Senn is innocent. I think he knows something about the horrible fate of Mrs. Craig, something which he has never told, possibly something which he may never tell, but——"

"But you arrested him and brought him to trial for the crime."

"Certainly. But only to try and frighten him into telling the truth. I did not expect him to say he killed Constance Craig; I did expect him to tell who did. Perhaps he doesn't know; for his own sake, I hope he does not; for my own sake, I hope so, too; for while I am sure that he knows much more than he has told, I don't know how much it is—I cannot guess how much it is. *And I am sure others know more than they have told*, and I feel certain that there is no one in all the world from whom it will be more difficult to get information regarding that horrible event than from Gilbert Senn."

"I presume not," said the clergyman.

"Others will volunteer information; others will aid me in every way in their power."

"I should think so," said the clergyman, earnestly, raising his mild eyes to look squarely and calmly into the stormy ones of the detective.

"And so I didn't expect the evidence to prove Senn guilty," continued Prier; "and——"

"And were astonished when it did?"

"But it didn't! Have you never heard that time-honored statement that a chain is no stronger than the weakest link in it? Have you ever examined into the strange characteristics of circumstantial evidence?"

"*Gilbert Senn was guilty*, I have no doubt of that," reiterated the clergyman.

"But the evidence of Aldrich cleared him."

"True; but what is easier than for a man to forget some little circumstance which would leave the evidence against Senn unshaken. Ten years is a long time."

"It is. But I believe Aldrich spoke the truth."

"I believe he meant to. *But did you never know a man to help another out of an awful scrape because he was himself a wicked sinner, and full of remorse?*"

Prier almost gasped. Those were almost the very words of the anonymous letter he had received. He had come to John Kane, and had used his arts freely to make the reverend gentleman unsuspicious of his errand; the talk regarding the murder and the trial had come about gradually and naturally; he had appeared to make Mr. Kane his confidant in regard to his business in Boomville; he had talked freely, and with the greatest apparent frankness; was it possible that all his efforts had been thrown away? Was it possible that the gentleman opposite him had understood him all the time? Was it possible that he, clear-eyed, open, frank, outspoken, had stooped to the use of an anonymous letter?

Prier gasped for breath. Perhaps it was as well he did. Had John Kane written the anonymous letter, or had he not? If the detective had not had to wait a little before he could speak at all, I think he would have asked him.

Prier got his breath and his wits at about the same time. Fortunate Prier! Sometimes we have to regret the ease with which we can speak when astonished, do we not, my friend?

"I—I do not understand you," said Mr. Prier, slowly and deliberately; "please explain yourself."

"I don't think you need any explanation. I suppose you knew all about your half-sister's affairs?"

Prier's face clouded.

"I don't understand the reason for your question," he said, guardedly; "nor do I grant that you had the right to ask it. But you have asked it, and I will answer it. I did not know all about my half-sister's affairs."

"You knew of the circumstances of her marriage?"

"No. I never met the man she married. I only know that she married in January, that he was drowned in June, and——"

"I wonder you did not go to the funeral."

"I could not. I was in San Francisco at the time, and busy in hunting out the details of a very curious crime. I'd like to tell you about it some time, for it was——"

"It was certainly no stranger than the facts clustering about your half-sister's life at that time. I'd like to hear it, though, when we've leisure. But now, I think, we have something more important to consider."

"I agree with you. And now tell me: what do *you* know of Constance Craig?"

"I know very little, and that only incidentally and by hearsay. I presume you knew that her marriage was sudden?"

"I did."

"And that she broke her engagement with another man in order to marry Mr. Craig?"

"No, I did not know that."

"Then I presume you did not know that she had made up the quarrel with the man she had formerly been engaged to marry, and that a year after Craig's death, if she had lived, she would have been a wife again?"

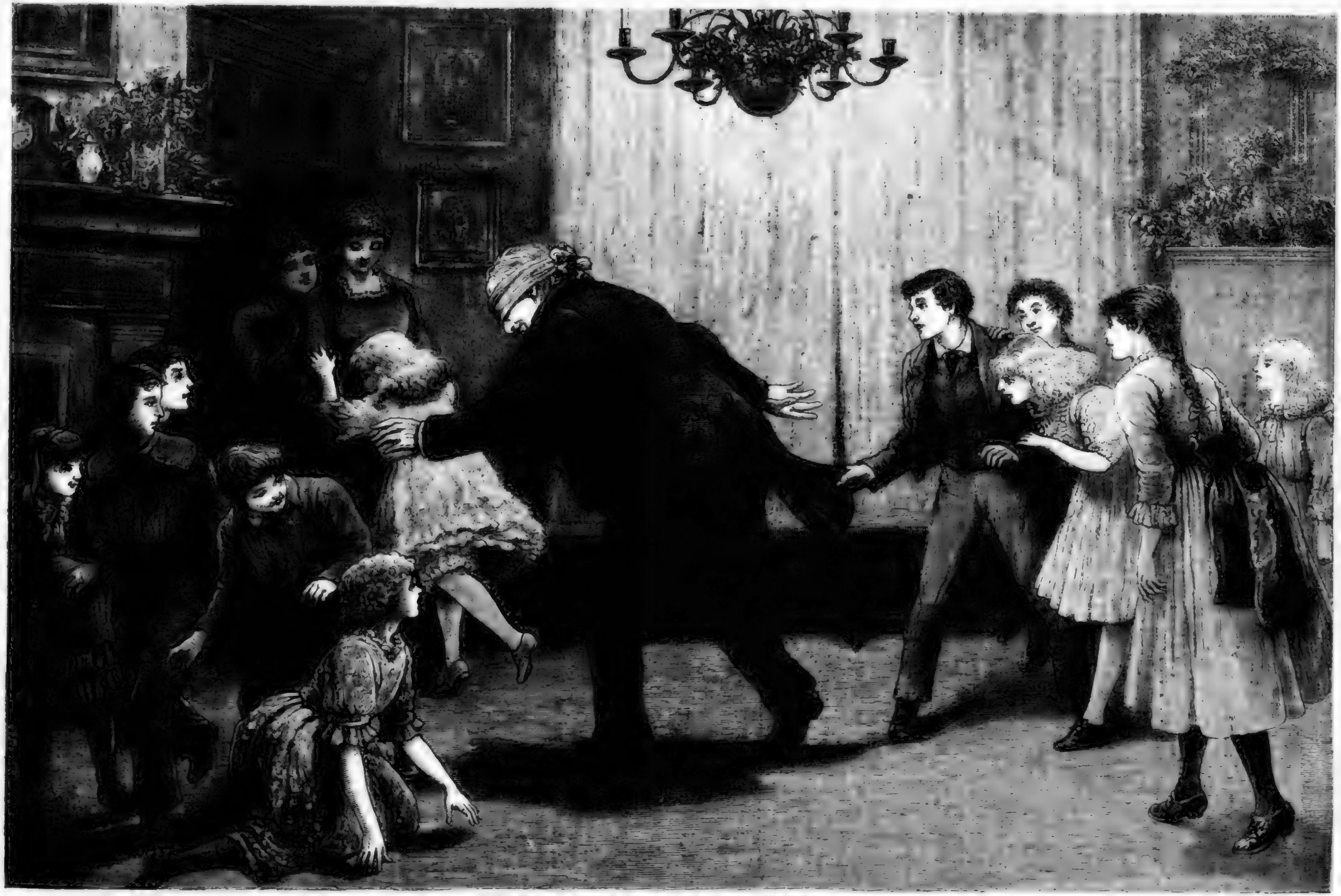
"No, I certainly did not know that. Who was the man?"

"A man who had not forgotten the woman he had loved—in less than a year—and with her still alive, whatever he may have done with his heart and memory in the years which have come since."

"Well, who was he?"

"He was at her funeral. So were you. *Who* was he?"

"I cannot tell. There were many there. The people of the country neighborhood—was it one of them?"



A ROMP AFTER DINNER.—BY TOWNELEY GREEN.

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John Kane shook his head.

"The citizens of Blankford—there were many, and I——"

The clergyman shook his head again.

"And—her—legal—adviser——"

"Well, who was he?"

"*Walter Aldrich.*"

"And you've named her lover! Can you see now the responsibility of indirect guilt he must feel? He had quarreled with the lady. It is more than possible that she had quarreled with others in making up with him again. *Ask Mr. Aldrich where he spent the Sunday before the murder——*"

Again the words of the anonymous letter. Again the clear, calm eyes of the bright young clergyman looking level into his own. Prier said nothing. He waited.

"*Ask Miss Webb how long she was away from home——*"

Are there unexplainable coincidences in mental action which no law can cover? Do the same causes bring about the same results in the world of mind as well as in the world of matter? Does the same knowledge express itself in the same words, again and again and again? These were the questions Prier was asking himself—these and the question as to who knew as much or more than Kane—in the eloquent pause the latter made.

"And then," continued Kane, "tell me that Senn is innocent—if you can—*if you dare.* I have no doubt Aldrich believes he is. But I—I have no doubt he is as guilty a man as ever went unhung."

Prier rose. He must go home. He must get away by himself to think.

"I thank you——" he began.

"There was a sudden ring at the door-bell.

"Excuse me a moment," said Mr. Kane; "you remember I must be my own servant. You may find something to interest you in the album yonder. There are few Boomville faces, for I have been here but a short time, but——"

And the rest was lost in the opening and closing of the door.

Prier picked up the album. You have all seen albums much like it. Weak faces—so weak that one wonders whether they are really the pictures of actual sane human beings; strong faces—denoting all the virtues and powers and aspirations which need only opportunity to be generals — statesmen — poets; baby faces; aged faces; the faces of those strong and vigorous still; the faces of those whose shadows lie in the sunshine on earthly hills no longer; the faces of the homely; the faces of the beautiful; the faces of the good; the——

"*The devil!*" said Mr. Prier, suddenly, as he turned over the pages of Mr. Kane's album. I regret having to write it. But he said it. Falling from the lips of one who had studied for the ministry, and who was possibly half regretful that he had found his work in life elsewhere, it could not but sound unpleasant and inconsistent. And inconsistent, too, it seemed, when connected with that which had certainly prompted it—the photograph of a woman—of a very beautiful woman—of a woman with a smile upon her lips—and with a face so finely copied by the sun that it seemed almost ready to speak—*the picture of Lurline Bannottie!*

CHAPTER XVI.

PRIER GETS ANOTHER LETTER.

Prier bade Mr. Kane "Good-morning," and went to the hotel to think. You have not forgotten that he came to Boomville on purpose to think. For some reason, possibly on the principle that one usually finds that of which he earnestly goes in search, this gentleman was finding plenty of things to think about.

He went to the hotel. He shut himself up in his room. He took a little book from his pocket. He took his pen. He drew his ink toward him.

"One may as well write the results of such an interview as that while his memory is fresh," he said, reflectively, "and change or modify his opinions afterward if the necessity arises."

He bent over his book. He headed a page as follows:

"RESULTS OF MY INTERVIEW WITH REV. JOHN KANE, BEING THE QUESTIONS I ASK MYSELF AND THE ANSWERS I GIVE."

And then, slowly, thoughtfully, laboriously, he wrote his opinions down:

"Did John Kane have any guilty knowledge of the death of Constance Craig? No, I am sure he did not. Did he learn of Aldrich's engagement in any strange and mysterious way? Probably not; it is more than likely, considering the distance from here to Blankford, considering the retired life Constance led, considering the naturally secretive habits of a lawyer, considering everything, that only a limited number knew of his engagement, and that it was never a subject for general gossip and discussion. But I cannot think that it was ever a secret—ever after any one knew of it besides themselves—in the sense in which we usually use the word '*secret*': I cannot think that his visits to her were concealed and private. And so, I suppose Mr. Kane learned of this engagement in some perfectly natural and legitimate manner.

"Was John Kane the only one, besides the two most interested, who knew of the fact that the lovers had made up their quarrel? I think not. Everything considered, it was, perhaps, marvelous that they had made up their misunderstanding, but I know of no reason why it may not have been known that they had—known to several, possibly to many.

"Has John Kane been perfectly frank and honest with me? I think he has.

"Has John Kane kept back anything I should know? I think he has not.

"Has his information been correct and accurate? *Unless he has been misled himself,* I think it has.

"Is John Kane my friend and well-wisher? I think so.

"Has he a firm opinion that Gilbert Senn is guilty?

"I believe he has—an opinion which it will be almost impossible to shake.

"Has he any personal reason for wishing Gilbert Senn punished? I think not. What possible reason could he have?

"What is his reason for thinking that Senn is guilty?

"His opinion that Matilda Webb was absent two nights, undoubtedly. And I confess that if she were so absent it would make the case against Senn about as black as ever circumstantial evidence made a case yet.

"Was she absent two nights? I don't know. I must ask her. I will.

"Did Kane write the anonymous letter? I think not. I fear it would destroy all my remaining faith in human nature if I found he did. But I will examine. I will satisfy myself. I will know.

"If he didn't write it—why was his language as it was? Were the expressions and questions so natural that one could not help using them? When I find another and another and another—if I ever do—who know something of the horrible event I am trying to trace to its guilty author, shall I hear this same series of questions again and again and again?

"I do not know; I cannot answer; I shall not try to answer. All this is beyond my powers. It lies so far outside the beaten tracks of the domain of Psychology, so far under the dark clouds which vail the unknown, so far from the natural, so near the supernatural, that I shall not attempt to, even guess."

Mr. Prier closed his book. He put it in his pocket. He leaned wearily back in his chair. Short as had been what he had written, it had taken long to write it. Weak, illogical, poorly arranged—full of groundless opinions and baseless beliefs—tainted with doubt that, once fully expressed, would have been doubt of man and his honesty, of God and His providence—shadowed with a superstition which would close certain avenues to knowledge with the command "*Ask not!*"—he had yet done his best.

His best, God help him, and all of us! His best! Man's best! Our best! The summary of life; the record of ruin; the confession of confusion; the *finale* of failure!

"There is one thing I'd like to know," said Mr. Prier, as he closed his ink-bottle and put away his pen.

(Yes, Mr. Prier, I think there is.)

"Though, of course, it hasn't anything to do with this case."

(Hasn't it? Has any event, anywhere, nothing in common with any other which one can mention? Does not the stone, thrown into the shimmering waters of the tropic sea, under the vertical rays of the burning sun, stir the icy flood which rolls restlessly to and fro, fretting its crystal walls and barriers, in the frozen night where the pole star shines in the zenith for ever? Nothing to do with this case? Nothing? Ah, Prier, Prier! Would you limit the range of human passion? Would you bound the omnipotence of God?)

"I'd like to know where John Kane met that female fiend, Lurline Baunottie."

(Yes, I think you would.)

"It would be as well to know how much or how little such a woman as she is to such a man as he."

(Yes, it would. Yes, Mr. J. B. Prier, you are right.)

"I'd like to know where she has been these many, many years since she slipped away from justice and disappeared utterly."

(Would you? How long is it since you walked by her side up the path, side by side with her, to see Elsie Senn the sorrowing made from the sweetness of Elsie Barron? How long is it since she lived here, where you passed her vailed figure every day? How long is it since you burned the announcement of her contemplated trip abroad with Mrs. Senn—an announcement read by every man and woman in Boomville? Ponder on all this, if you ever know it all, and then bow your head in wonder that any mystery ever becomes plain under your hands.)

* * * * * *

Mr. Prier took out the anonymous letter. He examined it with care. He looked at every word, at every letter, at every stroke and curve. Was it disguised? He had thought so. He had felt almost sure of it. But he did not quite know. There was a lurking doubt in his mind—a haunting suspicion—that when he found the handwriting of the one who had written it, found it somewhere else, found it under common and everyday sort of circumstances, he would find it a perfect match for this.

What of it? Just this. Mr. Prier had searched his memory for some hint of writing looking like this, and had found nothing to help him. He had no doubt that when he compared it with another specimen written by the same hand he should be sure of that fact; no matter how much care had been given to the production of this letter, no matter how much art had been used in the effort to make its authorship an impenetrable secret, he never feared for a moment that the problem would be too great for his powers. He had only to take a carelessly and thoughtlessly written specimen, produced by the one who had sent him this letter, put the two side by side, give them a thorough study, taking more or less time according to the skill the author had expended upon the letter warning him of the questions it would be well to ask Aldrich, and Miss Webb, and—shall we say?—Kane, and he would be able to go to the one who had written this letter, saying: "Some one knows more of the tragedy of Constance Craig than he has told. Anonymous letters hint, but tell nothing. Whoever knows must tell. And—'*thou art the man!*'" It might be difficult; it might take long study; the similarities to be considered, and to be referred to accident, coincidence, or to undoubted and valid evidence, as the case might be, might be slight—very slight—and not visible to one less acute and less experienced than he. But he could solve this question; he knew he could. And so—if the handwriting *were* disguised, it might be that any one of those most closely connected with his Boomville experience had written it. While, if it were free, and the usual handwriting of his unknown correspondent, he had to find some one whose writing he had never seen.

It was not the ordinary writing of Aldrich, or Senn, or Mrs. Senn, or John Kane, that he was certain of. For he had seen the writing of all these persons, and the general characteristics of a person's penmanship was something he never forgot.

Prier's first work was an endeavor to find who had written the anonymous letter. Don't ask me why. I do not know. I doubt whether Prier did. He had not been a tenth part so anxious before his interview with John Kane. Up to that interview he had had the asking of the questions suggested by that letter uppermost in his mind as the most important work to be performed in his immediate future. But now—with the mystery of the letter deepened and intensified by that breakfast-hour spent with the clergyman—he put aside the question he meant to ask Aldrich—the question he meant to ask Miss Webb—everything—to the end that he might know who wrote the letter, *if he could!*

It was not a difficult matter to obtain specimens of the writing of the different individuals who naturally suggested themselves to the mind of the detective. He did it without exciting question or comment or suspicion. He examined the work he obtained—examined it carefully and exhaustively—comparing it at every step with the unscholarly insult he so much treasured.

He began with the writing of John Kane. I don't know why. I hope Prier didn't. When a man has said that knowledge of a certain possibility *as a fact* would destroy his faith in human nature, it must be a terrible thing to sit down in deliberation to determine whether it is a fact or not. Of course, prudence made it necessary to examine Kane's writing. I grant that. And, equally of course, there is a great gulf fixed between honest prudence and wild and breathless suspicion. But I don't know why Prier began with Kane, and I say again that I hope he didn't know. I hope it was accident.

I scarcely know whether you would call the result of Prier's investigation by the name of success—or by that of failure. Perhaps it would depend on the standpoint from which the result was viewed.

One night he knew that Rev. John Kane was not the writer of the letter which so puzzled and annoyed him. The next night he knew that Walter Aldrich had not stooped to anonymous writing. The night following he was sure that Mrs. Elsie Senn was equally innocent. One more day of work, and he was certain it was not Senn.

He couldn't have said clearly, I fear, why he had examined into the penmanship of any of these persons. Kane had been frank and candid. It would have been strange, indeed, had Aldrich been so foolish as to turn suspicion so directly toward himself. He doubted whether Elsie Senn would have communicated with him at any time or under any circumstances—no matter how great her need. And had not Senn denied him any aid toward the solution of the mystery of the murder of Constance Craig—the mystery which overshadowed his life?

He could have given no more definite reason for looking upon one of them as the possible author of whom he was in search than the fact that some one must have written the letter.

"And I know no one else who is closely enough connected with the matter to be naturally suggested," he said, musingly, as he finished his examination.

And I suppose *he* didn't.

Do *you?*

* * * * * *

Prier retired early the night after he had determined the fact that the letter was more mysterious and baffling than he had hoped—or feared.

He rose late the next morning.

He looked old. He was very weary. He was somewhat dispirited. He had had a bad night. He awakened vaguely wondering whether he should live long enough to bring the murderer of Constance Craig to justice, and if not, to whom he should leave the legacy of his hate and his determination when he died.

What would he do?

He would do something very quickly. He would procrastinate no longer.

He breakfasted hurriedly. In an hour after leaving his bed he was in the office of Walter Aldrich.

"Good-morning," said the latter gentleman, looking up as the detective entered. I doubt whether he was glad to see Mr. Prier. His coming to Boomville was too closely connected with his own severe disappointment to make his presence pleasing.

Mr. Prier drew a chair close to the desk of the lawyer, and seated himself, without waiting for an invitation.

"I have come to ask you a few very plain questions," he said, abruptly.

Aldrich looked up quickly, but with no trace of agitation in his face.

"Very well," he replied; "I am ready to listen."

"They relate to the Craig case."

Aldrich smiled.

"I suppose so," he said quietly; "no one at all versed in the ways of the world would believe for a moment that you came back to Boomville for pleasure."

"No? Really I think you underrate the charms of Boomville. I believe it is generally understood that I reside here for pleasure."

Aldrich shrugged his shoulders.

"Perhaps so," he said; "at any rate you may have your own way. You wish to ask me some questions regarding the matter of the murder of your half-sister?"

"I do."

"I have already told all I know, in court, and under oath."

"Have you?"

"I have."

"Will you kindly tell me where you spent the Sunday before the murder?"

Aldrich flushed, but he looked the detective in the eyes as he answered, and his voice did not tremble or falter.

"I understand the motive of your question. I know the sort of reckless statements which have undoubtedly reached your ears. I wonder you have not been here with that question long before this. And now—I will tell you. I spent Sunday ten miles from Blankford, in the opposite direction from that in which Mrs. Craig lived."

"But——"

"I can prove it, if you desire," said the lawyer, quietly.

"You were Mrs. Craig's lawyer, were you not?"

"Certainly."

"When did you last see her?"

"I was at her funeral. Do you not remember me? I remember you well."

"I didn't mean that. When did you last see her alive?"

"*About* one week before her death."

"When—when——"

"The afternoon of the Monday of the week before the one when she was killed."

"And why—why——"

"On business," was the curt interruption.

"That was not my question. I had not finished. Why did you say '*about* one week before her death'?"

"Because I am not at all satisfied that she died Monday night."

"Do you—do you—*know*——"

"I *know* nothing about it. I never suspected that Mrs. Craig died other than a natural death until after the arrest of Gil—of Mr. Senn. But now, I doubt. *Ask Miss Webb how long she was away from home?*"

The same advice again. A third time. Once in the letter. Once from Rev. John Kane. And now from Walter Aldrich.

"Thank you, I will," said Prier, gravely.

"And that will prove whether—whether——" began Aldrich, and then paused.

"Well?"

"Whether I was a fool or a knave when I cleared Mr. Senn."

"A fool or a knave? I do not understand."

"Why, you know Senn must have been guilty if—if the discrepancy in the time can possibly be accounted for. There was never so strong a case of circumstantial evidence in the world before. Was I a fool in not asking this woman that simple question, or only a knave in trying to clear such a rascal as I feel Senn must be?"

"You think Senn is guilty, then?"

"Guilty beyond a doubt."

"And you hate him for that, I presume, quite as much as you do for his act in marrying Elsie Barron?"

"Certainly not."

"I am astonished at that. I should not have taken you to be a fickle man."

"I do not understand you, Mr. Prier."

"Don't you? Were you not engaged to Mrs. Craig at the time of her death?"

"No, sir."

"Had you and she not recently made up a quarrel—a lovers' quarrel?"

"No, sir."

"Were you not engaged to her before she married Mr. Craig?"

"No, sir. Those stories were all lies, wicked and malicious lies."

"Indeed!" said Mr. Prier.

"Wicked and malicious lies," repeated the lawyer.

"Good-morning," said Mr. Prier, as he hurried from the room.

"I studied law once, some years before I became a detective," he growled, as he ran down the stairs, "and I'll thank God every night and morning as long as I live that He saved me from being a lawyer."

"Lies!" he muttered, as he reached the street; "lies! I should think so"

But, Prier, in all seriousness, why did you fly into a

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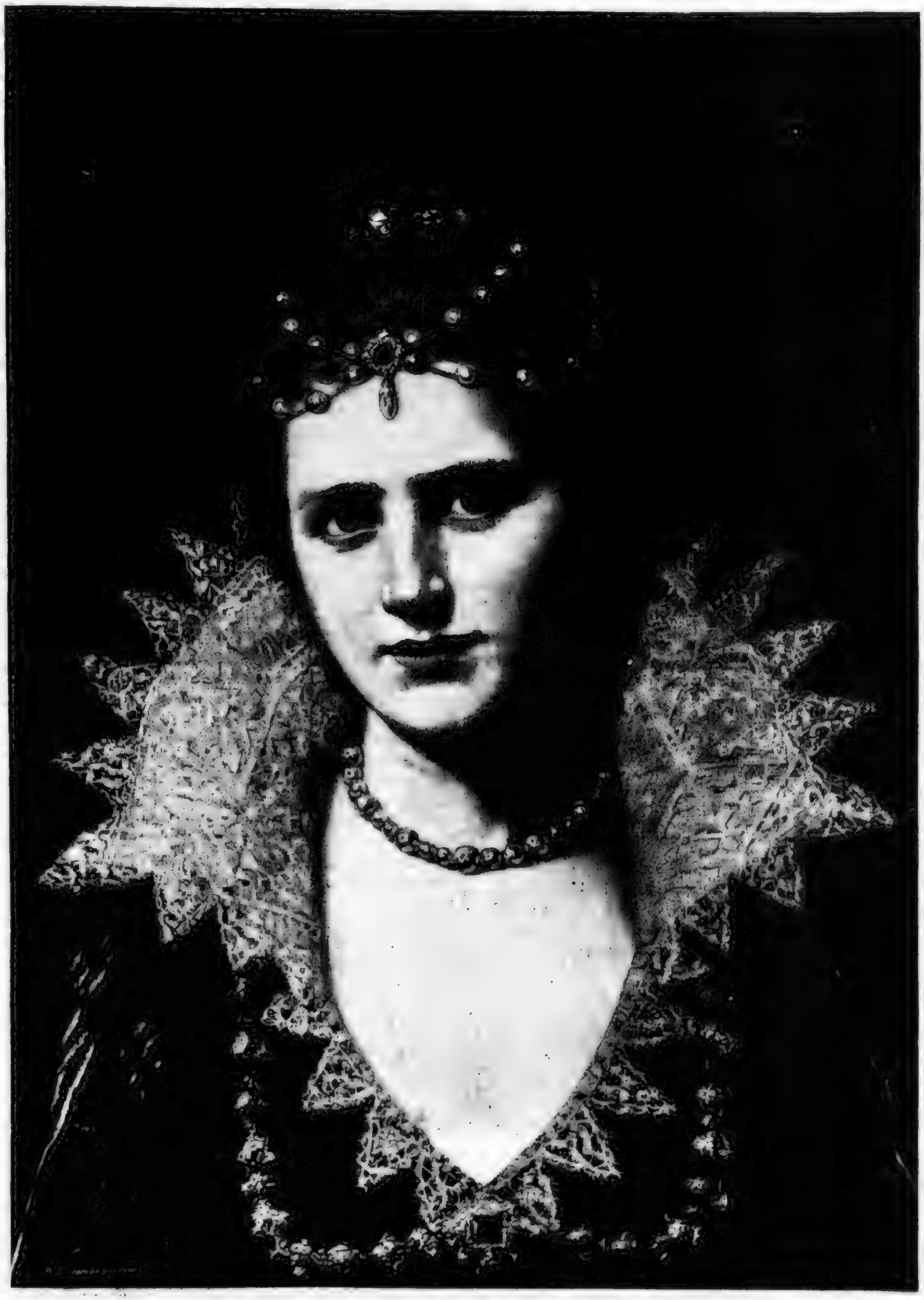


THE QUEEN OF THE BALL.—FROM A PAINTING BY H. SCHMIECHEN.

passion? Would not any man's story be better than his silence? Why didn't you ask him who invented the malicious lies? And when? And where? And why? Oh, Prier, Prier, foolish Prier!"

* * * * * *

Mr. Prier went to the Post-office immediately after his interview with Mr. Aldrich. There was a registered letter for him—a bulky letter. He opened it.

"More anonymous mystery?" he questioned himself, as he tore the end off the envelope.

It was not an anonymous letter which he drew out. It was a letter dated at Jahnway Park—a place he had never heard of, and signed by Jasper Jahnway—a name he had never known. No matter. It came from a place —and from a man:

> "MR. J. B. PRIER: I have been much interested in reading of the recent remarkable trial and triumphant acquittal of Mr. Gilbert Senn, in the matter of the murder of Constance Craig, as related in the *News-Express* of your city—or, rather, of Boomville, since your residence there is only temporary—and '*for pleasure*'!
>
> "My interest is the greater, because of the inclosed document, recently picked up by myself on my grounds. A fragment, without date or name or signature, there is still a similarity between the story it tells and the theory of Mrs. Craig's death as developed at the trial, which I cannot believe is a mere accidental coincidence.
>
> "I accordingly send you this bit of evidence, sincerely hoping it may be useful to you. In conclusion, I beg that you will not annoy me with either questions or gratitude. Your thanks I will take for granted: I assure you you are welcome. I have nothing to tell. I don't know who wrote it; I don't know to whom it was written; I know nothing about it but what I have told.
>
> "I might, in truth, add that I don't care who wrote or who received it. I send the document as a matter of duty. I like excitement, but I warn you I will not submit to being bored about this matter.
>
> "Hoping that you will understand, and insisting that you shall respect my bluntness, I remain, Very truly, your well wisher,
>
> "JASPER JAHNWAY."

Prier hurriedly read the document thus strangely sent him—the same one we read long ago.

And then—

He ran to the hotel as though suddenly insane.

He dashed up the stairs. He sprang into his room. He took the anonymous letter from the place where he kept it. He laid it and the document Jasper Jahnway had sent him side by side.

No need to search longer. No need to ask whether the writing was disguised or not. He had the mate to his anonymous letter. But who—who of all the world—wrote it? Must it be anonymous still—this letter, and this more horrible production—anonymous for ever?

He sank upon his knees. The tears ran down his cheeks as he turned his eyes toward heaven and his heart toward Omnipotence.

"Just God," he cried, "help me to find him! Deliver him into my power! *The one who dared write me this wicked, wretched letter of warning killed Constance Craig with his own hands!*"

CHAPTER XVII.

MATILDA WEBB AND MR. JAHNWAY.

WHERE did Matilda Webb live? That was the question Mr. Prier asked himself as soon as he had recovered a little from the surprise and emotion caused by his letter from Mr. Jahnway and the astounding discovery which had followed it.

It was easy enough to find out. Miss Webb had sprung into sudden prominence because of her connection with Mrs. Constance Craig in the days that were gone. Whatever might have been the difficulty of tracing her, after the lapse of the more than ten years which had intervened between the death of her once mistress and the trial of Gilbert Senn, there was no such difficulty now. Almost any one in Boomville could have directed you to the home of the gentleman in whose household Matilda Webb was employed.

"Twenty miles due west," said the keeper of the livery stable to whom Mr. Prier went that afternoon.

"And you can send a good driver—a fast team—and insure me quick time?"

"Certainly. You will start in the morning?"

"No; to-night."

The owner of the livery stable looked curiously at Mr. Prier.

"This isn't going to be a night for pleasure," he said; "the cold will be intense; the wind will cut like a knife; the——"

"The occasion is one of necessity," interrupted Prier. "Can you have the team at the hotel immediately after tea?"

"Certainly."

"Do so, then, without any delay or failure."

The night was a glorious one—to one who enjoyed Nature in her Winter garb, and did not dread the cold. The snow was deep, but the road was well packed and smooth. The cold was intense; the wind was keen and searching, but Prier and the driver were well protected from the wintry blasts, and had the vigor and courage to enjoy it all.

Sometimes the road lay along a high ridge, with slopes of virgin white reaching down into the valleys on either hand—down to the glassy surface of a frozen river on the left—away to the dark forest of evergreens on the right.

Sometimes they swept through narrow valleys, huge drifts of snow frowning down upon them with a weird and spectral menace in their white shapelessness and vague unreality.

Sometimes their way lay through the heart of pine forests, and the trees, tossing and groaning in the wintry blast, threw down their burdens of powdered snow upon the hurrying traveler.

And before them, ever before them, thrown down by the full moon which rode in beauty and majesty in the blue sky far, far away to the east, stretched the shadows they themselves cast—the shadows they carried with them.

Shadows on Prier's path! Emblems of the shadow which has lain before him for ten long years! In every life which does not face the light, they must fall. But as the moon mounts higher, as the night grows deeper and darker and more silent, as the day that is gone drops further and further into memory, and the glories of the day to be begin to whisper to hope, the shadows shorten —*shorten—shorten!* Let us thank God for that.

Five miles. Prier is anxious and nervous. He has never been in so great a hurry before. He could not tell why.

Some calamity seemed impending. He could not tell what.

Perhaps he had allowed the events of the last few days —and more especially of the last few hours—to shake his powers—his convictions—his faith.

Ten miles!

"Hurry," whispered Prier.

The driver bowed. He did not understand the need of hurry, though he did not doubt that Prier did. He knew that they were on their way to see Matilda Webb. He knew that she had testified at the trial of Gilbert

Senn. He knew that J. B. Prier was a detective—the "great detective" he had heard him admiringly called—and it probably never entered his brain to attribute such a commonplace quality as doubt to him. His mind had not conceived it possible that God had endowed this wonderful man with less than a mysterious and unexplainable infallibility. So he bowed his head, and they hurried.

Fifteen miles! Prier drew out his watch. He nodded his head approvingly.

"You've done well in the last five miles," he said; "I have five dollars for you if you do the next five in less time."

The horses were beginning to show signs of weariness. The road was becoming rougher. Clouds were darkening the sky.

But the driver bowed again. He spoke cheerfully, but commandingly, to his well-trained team. The speed increased.

For Prier had closed his driver's mouth with the one final and unanswerable argument which has survived all the forgotten nations of antiquity, and is spoken in all the languages which have existed since Babel. The argument which gives energy to weariness—the argument which makes the rough smooth—the argument which lightens darkness—the argument by which ugliness conquers beauty, ambition overcomes right, and craft coerces honor—the argument of MONEY!

On and on and on. Swifter and swifter, though the road grew rougher and the night darker. On, until——

They dashed round a curve in the road, and up a hill from out the valley in which the last two miles or more of their ride had been.

"We shall see Brown's house in a minute——" began the driver.

And then they saw it!

A pillar of smoke-capped flame swayed and swung in the gale of night to a height of twenty feet above its roof. Every window had a fiery banner, shaking defiantly in the icy wind. And even as they looked, the roof went down, the walls crumbled into a fantastic shapelessness, and a torrent of sparks and brands rose heavenward as though exulting in the triumph of ruin over man.

The sleigh dashed into the grounds, and up to a group who stood in frantic inactivity not far from the fierce fire dancing devilishly over that which had been a happy home less than a half-hour before.

"Has any one——" began Prier.

Mr. Brown hurried to meet him, and grasped his hand.

"It was so sudden," he said, "that one of the children was forgotten. The mother supposed I had him; I supposed he was with her; the girl discovered the truth first, and——"

"Who? Miss Webb?"

"Miss Webb; and she brought him out in safety. But I guess she has given her own life for him. If we only had a doctor——"

Prier sprang out of the sleigh.

"Here," he cried to the driver; "you go for the nearest physician, and go quickly. I'll pay for the horses if necessary; "don't you spare them."

The driver, well acquainted all through the country thereabouts, and happily a man who had learned to obey orders without stopping to question them, drove rapidly away.

Prier ran to the weeping group not far away.

"I studied medicine once," he said; "several years before I became a detective, and I guess I would find myself a pretty fair physician to-day."

He knelt down in the snow, close beside the quilt on which they had laid the faithful woman.

He raised her hands, burned and blackened, and groaned as he tenderly laid them down again. He looked at her face—a face that one would have been keeneyed indeed to have recognized as that of Matilda Webb, and his eyes filled with the manly flood he could not restrain. He bent over her, and listened long to the laboring lungs fighting for her the battle between life and death. He raised his head.

"She is a martyr to duty," he whispered, solemnly, to Mr. Brown, as the latter bent nearer to him to listen. "There is no hope."

Low as he had spoken, the woman heard him. She rolled her head a little to one side, to face him, and the shriveled eyelids were raised a little from the eyes which would never see again.

"Are—are you Mr. Prier?" she said, in a whisper.

"I am."

"I—I—must die, must I not?"

"You must die," said Prier, frankly but tenderly.

"I—I have one load on my mind which I must share with you," she whispered. "I shall die easier if you know it. I—I went away on Sunday. I was gone two nights. I had permission to be gone but one. But—Sunday night was so stormy—so stormy—and I thought it would not be necessary to return through the mud and rain of Monday. And yet — and yet — if I had gone home on Monday—Mrs. Craig would not have been alone—she would not have been killed. You loved her, Mr. Prier. Can you say to me, as I die here, that you forgive me?"

"There is nothing to forgive. But I will say it if you wish. In the name of Constance Craig, I forgive you."

"I thank you so much, Mr. Prier, for now I can die happy."

"There has never been anything to reproach yourself for, my dear woman; for I have no doubt you would have found your mistress dead on Monday if you had returned on that day. I feel certain that she was killed on Sunday night."

"Do you? Then my absence the second night could have made no difference. But—but——"

She paused, tired and worn with the effort she had made, but she could not give up yet—she could not surrender herself to the power of death yet. She spoke again.

"Say, then, that you forgive me for not telling my story in the court-room. I did not guess the need there was for it. I did not suspect the trick by which the accused would be saved. I—I"—her voice was full of passionate pleading now, but so low that Prier's ear almost touched her lips as he bent down to listen—"I could not bear to tell the story of my disobedience and neglect, and—and—my head ached *so* hard—*so* hard—and I could not be there when the crisis came—and so——"

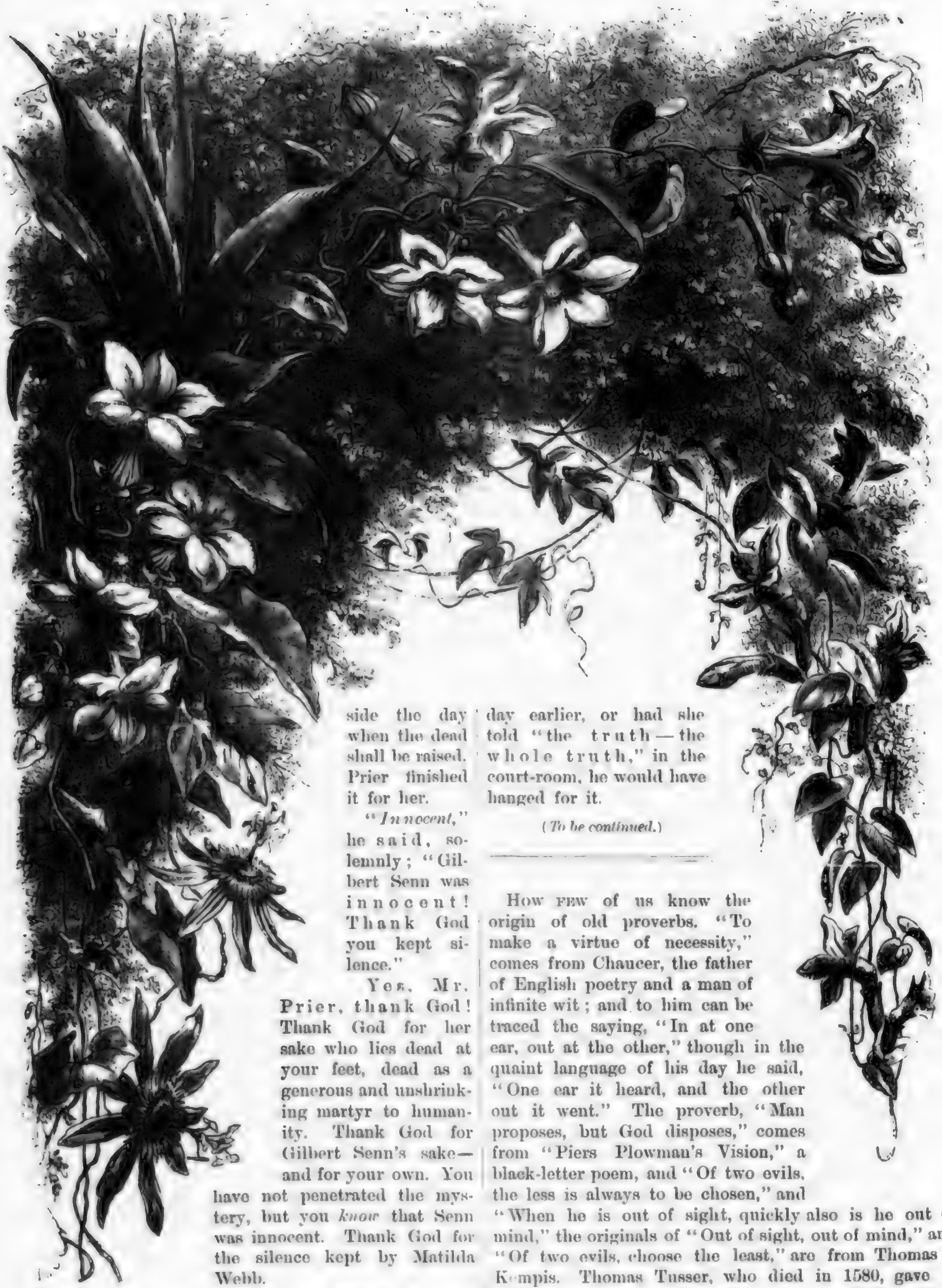
She paused again.

"And so there is nothing to forgive, though I say again, I forgive you. And so—I say I thank God that——"

"I—I don't understand you," whispered the lips which death was touching with the seal of silence; "I do not understand you, though you have given it to me to die happy. *For—surely—Gilbert—Senn—was——*"

She spoke no more. Prier crossed her burned hands reverently over her noble heart. He rose to his feet. Her sentence would never be finished by her lips this

XUM



side the day when the dead shall be raised. Prier finished it for her.

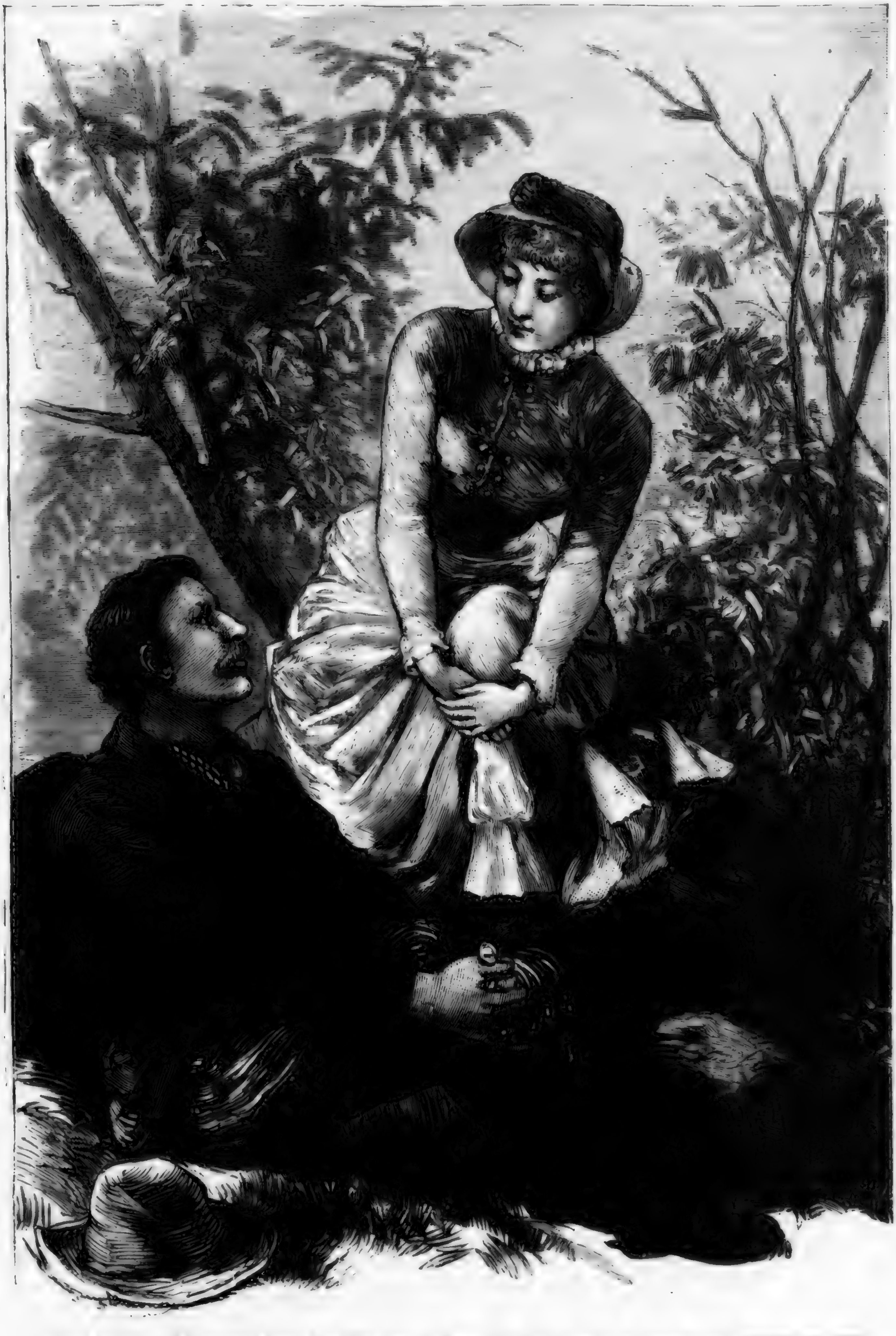
"*Innocent,*" he said, solemnly; "Gilbert Senn was innocent! Thank God you kept silence."

Yes, Mr. Prier, thank God! Thank God for her sake who lies dead at your feet, dead as a generous and unshrinking martyr to humanity. Thank God for Gilbert Senn's sake—and for your own. You have not penetrated the mystery, but you *know* that Senn was innocent. Thank God for the silence kept by Matilda Webb.

And to you, readers all, men and women with such a hatred for crime and criminals that you count accusation scarcely less than conviction, and call circumstantial evidence *proof*—remember, that though Gilbert Senn was innocent of the murder of Constance Craig, had Matilda Webb gone home one day earlier, or had she told "the truth—the whole truth," in the court-room, he would have hanged for it.

(To be continued.)

How FEW of us know the origin of old proverbs. "To make a virtue of necessity," comes from Chaucer, the father of English poetry and a man of infinite wit; and to him can be traced the saying, "In at one ear, out at the other," though in the quaint language of his day he said, "One ear it heard, and the other out it went." The proverb, "Man proposes, but God disposes," comes from "Piers Plowman's Vision," a black-letter poem, and "Of two evils, the less is always to be chosen," and "When he is out of sight, quickly also is he out of mind," the originals of "Out of sight, out of mind," and "Of two evils, choose the least," are from Thomas à Kempis. Thomas Tusser, who died in 1580, gave us "The stone that is rolling gathers no moss," Better late than never," "It is an ill wind that turns none to good," "Christmas comes but once a year," "Safe bind, safe find," "Look ere you leap, see ere thou go," and "Such master, such man." Shakespeare also uses many of our most common proverbs.



SIMPLE REUBEN.—"HE SEATED HIMSELF AT HER SIDE. 'REUBEN,' SHE BEGAN—FOR HE INSISTED SHE SHOULD CALL HIM THAT—'THIS WILL BE OUR LAST VISIT TO THIS LOVELY SPOT.'"—SEE NEXT PAGE.

XUM

PAINTED BY WATTEAU.

By D. M.

"Painted by Watteau"—so the legend runs
About the quaint gilt frame. "And painted well,"
I murmur; for the tenderest of suns
Shines softly in upon a forest dell,
Where, robed in silken sheen and satin floss,
Ladies of fashion tread the golden moss.

While gentlemen, our great-grandfathers, trip
With crook in hand beside a crystal stream.
Sure never sweeter smile moved human lip.
The poet says, "Things are not what they seem."
Perhaps they *were* not, then. Perhaps that grace
Was only in the figure and the face,

Leaving the heart a false and foolish void.
Perhaps they felt not that the grass was green,
And that the flower, wherewith the white hand toyed,
Shone with the silent speech of the Unseen.
Perhaps that woman's heart was hard and cold;
Perhaps the man that wooed her wooed her gold.

Past painter's name and picture, I look out
Through the lawn window, where the shadows pass
So swiftly, and each shadow with a shout
Of sweet girl laughter from the trampled grass.
Ah, Watteau, thou art dim for all thy sun;
The world is wiser, and thy day is done.

Look at her there, the daughter of the house,
Slim as a lily, fair as flowers are fair.
And look at him, the lord of leagues of grouse,
Stalwart as Galahad, and as debonair.
No rouge or powder, wreath or ribboned crook
Mock the glad morning light by lawn and brook.

Come, paint them as they stand—her tumbled hair,
Flushed cheek, and laughing eyes of clearest blue;
He bronzed and bearded. Hang the picture there,
And say which is the nobler of the two—
Those old-world maidens with their shepherds gay,
Or these, the man and woman of our day.

SIMPLE REUBEN.

By Carlin Gray.

Chapter I.

A certain little Minnesota town, which may as well be called Redwood as anything else, was, not many years since, the scene of one of those horrible railway disasters that now and then occur to terrify the traveling public. Among the badly wounded was a certain Mr. Delamayn, of New York, who, in company with his lovely daughter Fanny and a prim maiden sister, was homeward bound from a month's sojourn at the Lake of the Woods. His injuries were so severe that it was thought he could not be removed to the town—a mile or so distant—by the wrecking-train dispatched to the scene of disaster, and the two ladies were bending over him in an agony of despair, when the younger felt a hand laid upon her arm, while a kindly voice said:

"Can I be of any sarvice to ye, ma'am?"

Raising her tearful eyes, she beheld at her side a man attired in rough garments, which, however, did not conceal the shapeliness of his tall and powerful frame.

He was regarding her with eyes brimful of pity, and his comely face wore an air of simple good-nature that won her confidence at once.

"Oh, sir," she cried, "is there not some dwelling near at hand to which my father may be removed?"

"Oh, yes," he cheerfully replied. "I live 'bout a mile back, and you're welcome to come thar with him."

"Thank you," she said, gratefully, rising, while her aunt continued to support the wounded man. "But I see that you have no conveyance at hand," she continued, glancing rather hopelessly about her.

"We sha'n't need any," he replied. "I can carry the poor gentleman handy enough, and you and your mother——"

"My aunt—Miss Delamayn," she said, correcting him, while that lady raised her eyes rebukingly to him, bowing somewhat more coldly than the occasion justified.

"Oh, jest so. How d'ye do, ma'am? Glad to see ye!" he said, with great volubility, bowing and touching his hat with rustic grace. "That is to say," he continued, in doubt of the propriety of the remark, "I'm right sorry to find ye in such a diffikility. As I was saying, however, my home is only a mile back, and I can carry the poor creetur' thar in no time. So come along, ladies, and be sure you'll find a welcome there."

Saying this, he lifted the insensible man from the ground, and, turning into a road that led northward through the forest, struck out with long, easy strides that the ladies found it difficult to keep pace with.

Notwithstanding his heavy burden, he talked incessantly on the way, anathematizing at times the managers of railways in general, and at others entertaining them with genealogical sketches of the Todd family, of which he, Reuben—he informed them—was a member.

His remarks were so humorous and unique that, in spite of her anxiety, the younger Miss Delamayn was really forced to smile now and then.

"My mother," he remarked, as they neared their journey's end, "is the gentlest creetur' anywhar in Minnesota, and you ladies'll take to her right off. We ain't got much to offer ye in the way of shelter, but mother's mighty tidy in her work; besides that, we're honest people, and them's virtues enough to make a shanty endurable, I'm a-thinking."

Thus he rattled on until they reached a small clearing in the forest, in the centre of which stood an humble dwelling, near which coursed a pretty stream, its clear waters shimmering in the sunlight of the glade, and growing dark and cool in the shadows of the umbrageous forest.

Before the open door was seated a mild-featured woman of some fifty years, who, engaged in spinning, arose from her work at the appearance of the little party, courtesying to the ladies.

"Why, Reuben, whatever has happened?" she exclaimed.

"A smash-up on the road, mother," he replied, "and this poor gentleman is nigh done for. These ladies are his sister and daughter, and we must take care of 'em somehow until he comes round."

"Certainly—certainly!" said the good woman, in tones of pity. "Come right into the house, ladies, and make yourself at home; and you, Reuben, carry the poor gentleman into your room."

She led the way into a small room, whose solitary window admitted the balsamic airs of the forest, and whose scrupulous neatness authenticated Reuben's assertion of her love of cleanliness.

The coverings of the humble bed were spotlessly white, and it was with a sense of thankfulness that these aristocratic ladies saw their unfortunate kinsman resting on so inviting a couch.

"Now, Reuben," said the widow, whilst assisting the ladies in the care of the wounded man, "do you hurry off to town and bring Dr. Jones as quick as possible."

Reuben started off in quest of the rural Esculapius, but, owing to the many injured, he found some difficulty in securing that person's services.

However, upon the arrival of several surgeons from a neighboring city, Dr. Jones was relieved, and hastened at once to the bedside of Mr. Delamayn.

He found the patient suffering from internal injuries, which, after a critical examination, he pronounced curable. Then he proceeded to dress the external wounds in a manner that gave proof that he knew something of the science of surgery, notwithstanding his coarse garb and homely phraseology.

It became now the joint duty of Reuben and his mother to care for their guests, and never once did they relax their kindly attentions.

As for Reuben, he scoured the forest for game, and took unlimited quantities of trout from the near-by stream, which, with the purest of milk, the sweetest of butter and the whitest of bread, brought strength to the invalid, and caused the younger Miss Delamayn to recall with something like contempt the "swell" dinners of higher society.

At once her father began to mend, she began the habit of accompanying Reuben in his piscatorial excursions, generally to a point in the stream where it formed into rapids. Here the speckled beauties abounded, and through his instructions she was soon able to cast the fly with almost certain success.

One golden day, some weeks after her compulsory introduction to the simple foresters, as the first tints of Autumn were touching the maple-leaves, they repaired as usual to the rapids, and Reuben began to make ready the fishing tackle.

Miss Delamayn had seated herself on a moss-grown rock, and, observing him about to cast the line into the stream, said:

"Don't let us tempt the fish to-day, but come rather and sit with me, and we'll talk instead."

Flinging the rod aside, he came to her and seated himself at her side.

She was a pretty girl, in perfect health, with warm cheeks glowing with the hues of the rose, and soft brown eyes radiant with the light of happiness.

"Reuben," she began—for he had insisted she should call him that—"this will be our last visit to this lovely spot, and to-morrow you and your good mother will be relieved of the burden of our care. I shall never forget your many kindnesses, my friend, nor will I soon forget this beautiful wood and stream."

She waited silently for her companion to speak, but he said nothing.

Suddenly she felt something fall lightly on her hand that was idling with the soft mosses at her side, and looking, she beheld what appeared a teardrop there. She blushed crimson, but was still courageous enough to turn her questioning eyes upon him.

That individual was pulling his brown mustache with unnecessary vigor, and gazing intently at the patch of blue sky showing through the rift in the russet canopy overhead.

"Reuben!" she exclaimed, betraying both surprise and emotion in the tone.

But he apparently heard her not, for he made no answer, but continued steadfastly to survey the regions above.

"Reuben!" she again said, laying her hand on his arm; "tell me what it is that troubles you."

"Nothing at all," he answered, in husky tones—"at least nothing that would interest you."

"Now, Reuben," she said, reprovingly, "that implies your belief in my ingratitude. You ought to know that anything concerning your welfare and happiness would interest me. Then tell me the cause of your apparent unhappiness."

"Well, Miss Fanny," he began, in a hesitating way, "I'm sorry—that is to say, I'm right glad we've been of sarvice to you, but somehow I'm sorry you came here."

"Sorry we came here! What do you mean, Reuben?" she asked, perfectly ignorant of the cause of his dejection.

"Miss Fanny," he said, rising and standing before her in an attitude of contrition, "I thought I could let you go away and never tell you what's in my heart of late—but I can't. Hear me, then, and forgive me if you can. I'm only a rough lumberman, but I'm an honest man, ain't I?"

"Oh, yes," she answered, nervously, wondering what he would say next.

"Well, then, when you came here with your poor father, I says to myself, 'Reub, do your best for 'em, and keep clear o' the young lady.' But I couldn't keep clear of her; or, when I did, I was sure to see her sweet face framed in the bright leaves of the woods, or looking up at me from the water there, and, though I tried to run away from it, it followed me everywhar. I never knew how fast you was a-holding me until one night when I stood out here and watched you as you sat by your window; for, by-and-by, when you went away, and I couldn't see you any longer, it seemed as if something had gone out of my life and left it empty-like, and since that time I've been an unhappy man."

He turned from her now, as if in shame of his confession.

"I am very sorry for you," she managed to say.

"I have no doubt of it," he meekly returned; but there was just a tinge of bitterness in the tones.

"Do not misunderstand me, Reuben," she gently said. "I do not despise your love, for I know it comes from an honest heart. It is because I so much esteem you that I do not encourage you in this. Think what the future would be should I do otherwise. I could not live here, you know, and you could scarcely begin life in a city."

"You're right, Miss Fanny," he returned, with a sigh. "I never thought of that, but only of you. It wouldn't be kind to ask you to live in a wilderness, and, of course, I could not make a living in a city. I hope you'll forgive me this time, and I'll never speak on the subject again."

And, to assure her he was wholly resigned to her view of the matter, the poor fellow indulged in a sickly smile.

"But we shall ever be friends—shall we not?" she queried.

"Oh, yes," he answered. "You may always count on that."

"And you will let me write you when I am home?" she asked.

"Will you do that?" he cried, his fine face flushing with pleasure.

"Yes, surely," she answered; "and you shall write me in return."

He hung his head at this, and was silent for some moments. At length he looked up, and said:

"I'm ashamed to let you know it, Miss Fanny, but I never larned to read or write—in fact, I never got a chance to learn. One don't need much eddication in my business, and I never gave it much thought until you came, and then I wished I had."

"Oh, Reuben," said this sweet girl, "if you had only told me this in the beginning of our acquaintance, I could have taught you to do both!"

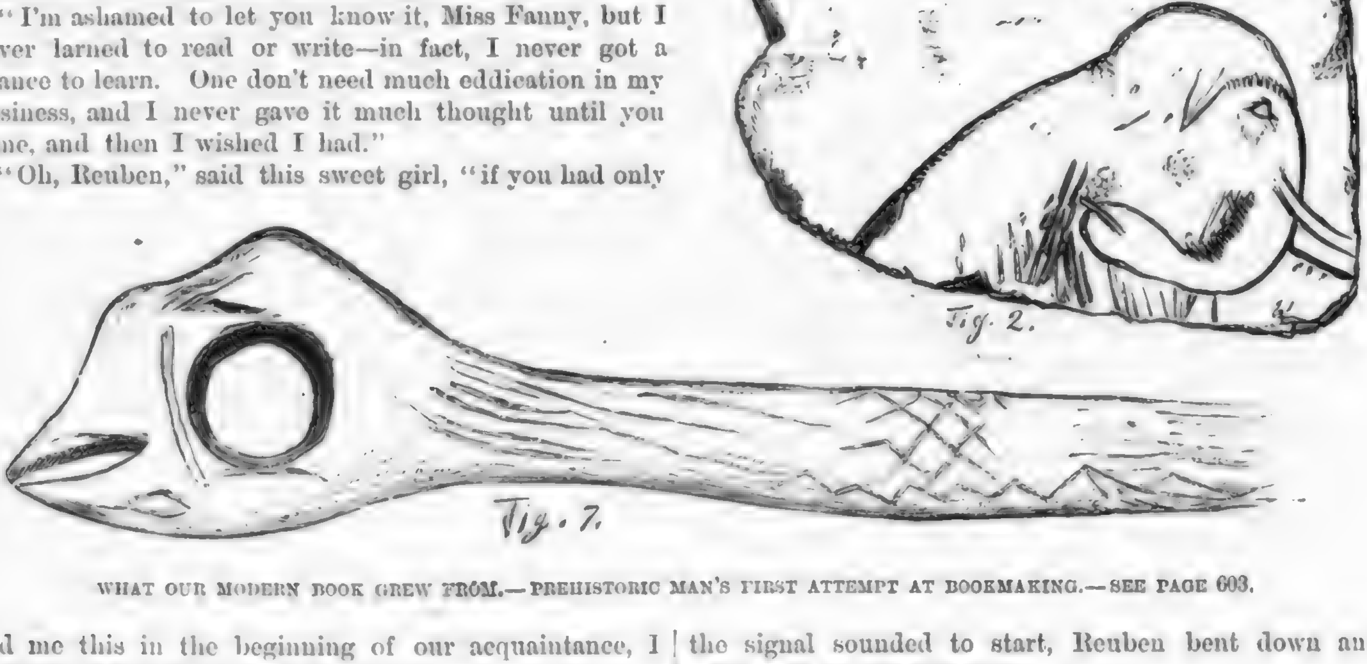


Fig. 2.

Fig. 7.

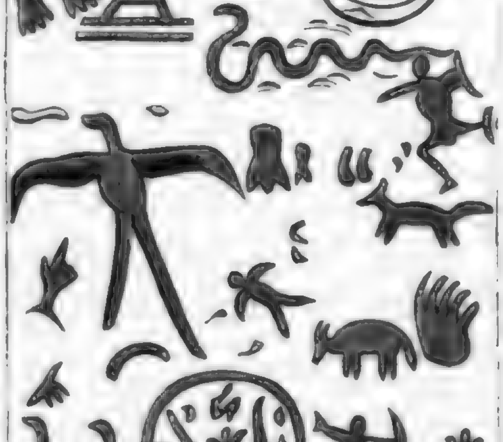
WHAT OUR MODERN BOOK GREW FROM.—PREHISTORIC MAN'S FIRST ATTEMPT AT BOOKMAKING.—SEE PAGE 603.

"I was ashamed to let you know it, and now it is too late," he returned, with a bitter sigh.

"And to think I cannot write you, after all!" she said, in tones of disappointment.

"Oh, yes, you can," he cried, in alarm. "You just send the letter along, an' I'll get old Uncle Cale Peters to read it for me. He lives about a mile back, and makes baskets for a livin'; but he's eddicated, for all that."

"Very well, then; in a month from to-day you may expect a letter from me. But, Reuben," she said, brightening up, as with some happy idea, "why don't you ask this old gentleman to teach you how to read and write!"


SIOUX WARRIOR'S RECORD ON A BUFFALO ROBE.

"I'll do it!" he cried, with energy. "I never thought of it afore, but I'll commence right away after you leave us, and jest as soon as I've larned how I'll write you a letter."

"That will be splendid," she said. And she wrote on a card a list of such books as she thought were suitable for a beginner, after which they both went slowly, and she somewhat sadly, from the place.

The next morning found the Delamayns safely on board an eastward-bound railway express-train, and as the signal sounded to start, Reuben bent down and whispered to the fair girl:

"Good-by, Miss Fanny; we may never meet again, but I want you always to remember me as your friend, one that'll come to you at your bidding, no matter whar you be, and, if you're in need, stand between you and the world."

"I believe you, dear friend," she murmured, her soft eyes filling with tears, "and I will not forget you. Good-by—and, Reuben, you'll some time come and visit us, will you not?"

"Would you like to hev me?" he asked, eagerly.

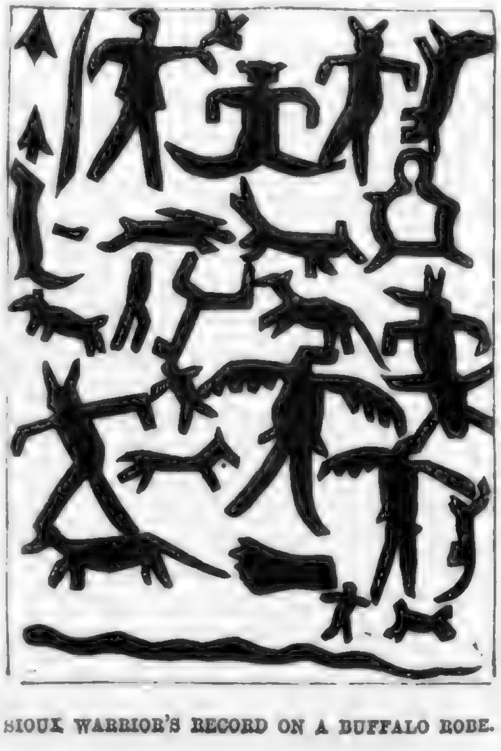
"Yes, surely," she replied.

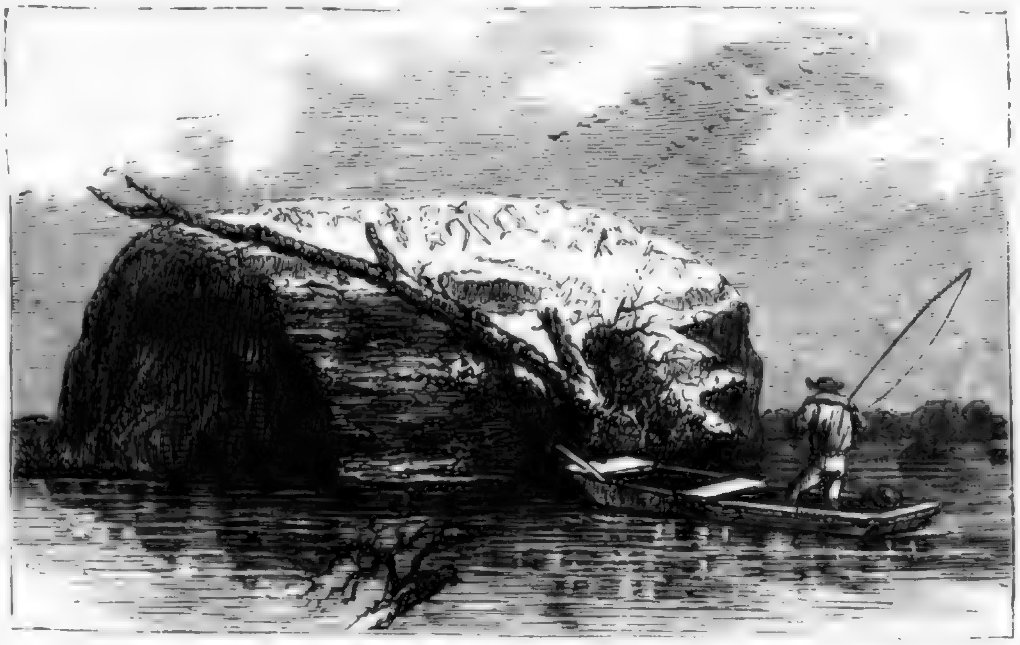
"Then I'll come, if God lets me live. Somethin' tells me we'll meet agin; so don't forget me, and I'll come."

Then he was gone, and the noisy train swept out of the little station, and Miss Delamayn's tears gathered thick and thicker as she was borne swiftly from the place that had become dear to her through its many happy associations.

CHAPTER II.

SLOWLY and sadly went Reuben back to his now desolate hearth. The strength that had supported him in the presence of the woman he adored was gone now, and he sat wearily down with a sigh that caused the


SIOUX WARRIOR'S RECORD ON A BUFFALO ROBE.



WHAT OUR MODERN BOOK GREW FROM.— INDIAN ROCK INSCRIPTION.
SEE PAGE 603.

widow to regard him with anxious eyes, for she had read his heart weeks before.

By-and-by his eye fell upon the little sketch that *she* had given him a month gone, and the sight of this, *her* handiwork, added to the desolation that reigned in his heart.

Sighing again, he rose from his chair, and donning his old and tattered coat and hat, which for long had been discarded, hurried off to the woods.

There was a moss-covered rock which had been her favorite seat, and near by it was the birch-tree on whose polished bole she had carved her name.

The dying leaves came drifting downward one by one, and laid their bright colors on the sober mosses; the soft southern winds sighed among the half-clothed branches overhead, as though mourning nature's universal decay; and as he heard and saw, a thousand memories of the brief and happy past rose up before him, and he was fain to turn from the scenes that awoke them and seek forgetfulness elsewhere.

He had no heart for labor this day, and remembering that he must purchase the books which she had named, he started off to the village in quest of them.

There was but one place in the town where they might be obtained, which was kept by two spinster sisters of the respectable name of Spriggins, one of whom was tall, thin and sober, while the other was short, broad and merry. They were said to be twins, but this was denied by either speaking of the other as her *elder* sister.

Thither Reuben repaired, somewhat ashamed to ask for the primers and much tempted to bribe a small boy, idling at the door, to make the purchase for him.

"Going to teach, Reuben?" facetiously inquired the merry one, who had long wished to be called Mrs. Todd.

"You've hit it exactly, Miss Spriggins," he answered, dryly; "I'm a-goin' to teach Reuben."

"That's beautiful writing," she remarked, referring to the names of the books written by Miss Delamayn. "I s'pose it's that lady's that's been a-staying at your place since the accident?" she ventured.

"It ain't onlikely; but I s'pose you'll sell me the books all the same, won't you?" he said, a little coldly, not liking the question.

"Oh, certainly," she answered, with much dignity; and she ceased to quiz him.

Reuben paid for the books and departed. Then the vials of virtuous wrath were opened.

"Aristocracy in a flannel shirt!" snickered the merry one.

"Odorous wretch!" exclaimed the sober one, misquoting the adjective.

But the object of this mutual outburst was speeding homeward, there to begin his lesson of love.

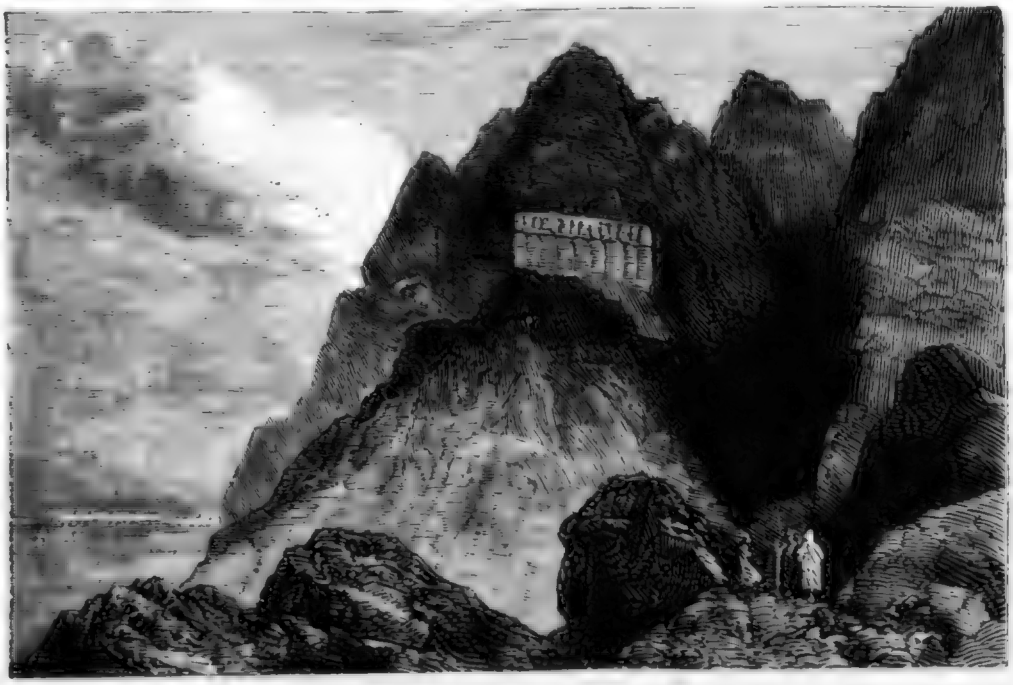
Day and night he pored over the simple lessons set him by the old basket-maker, and when the time for Miss Delamayn's promised letter came round, he was able to read most of the lessons contained in his first primer.

Early in the day that would bring the promised letter he set out for the post-office, which, much to his annoyance, occupied a corner of the Spriggins establishment, and after a brisk skirmish with his now sworn foes, secured the treasure.

Hurrying home, he held it forth in view, exclaiming with childish delight:

"I've got the letter, mother, I've got the letter!" and he handed it to her that she might examine the beautiful calligraphy that adorned the creamy envelope.

Next Uncle Caleb was called



ASSYRIAN ROCK TABLET NEAR KERMANSHAH.

in to read the precious missive, which was done with much dignity—Uncle Caleb being somewhat proud of his scholarship.

Miss Delamayn stated that she had arrived at her home in safety, though somewhat wearied with the journey. Her father was fully recovered, and wished to be kindly remembered to them.

As for herself, she would never, never forget them; and if she could only know that some time in the future she might revisit those grand old woods, and listen again to the murmurings of the beautiful river, it would make her very, very happy.

She expressed the hope that Reuben would persevere in his studies, and that he would some time pay her a visit, as he had promised to do.

After a kind message to the widow, she concluded her letter with an equal expression of gratitude to both for the many kindnesses herself and dear ones had received at their hands.

"A very proper young lady," observed Uncle Caleb, after he had read the letter a second time.

"She ain't nothing else," affirmed Reuben. "She's jest perfect. Not a bit proud, with all her money; and you can always depend on what she says."

Reuben slept but little that night, but spent the long hours in dwelling upon the contents of the letter, and with the first flush of the morning light he was up and poring over his now doubly precious books.

All that Winter and the Summer following it he toiled like a slave in the forest, and each brief respite snatched from his labors was devoted to study.

August came—the anniversary of that event which had so influenced his life—and it found him ready to pen his first letter. Heretofore Miss Delamayn's letters to him had been answered by Uncle Caleb; but now he, Reuben, was able to do this, and as he sat down to his task his great, honest heart beat high with joy and pride.

At once it was finished, Reuben read it aloud to his mother, who pronounced it fully equal to poetry.

Referring to his books, and finding that he had spelled all the words correctly save one, "very," which was written with two "r's," and which he concluded to pass, saying facetiously that the superfluous letter would show her he wasn't stingy with the ink, he placed a geranium-leaf inside it and sent it on its way—a phenomenon of erudition to its proud author.

In due time an answer came, complimenting him so prettily that he was wellnigh demented thereby.

Hope began whispering to him so importunately that, ere he had fully weighed the advisability of the thing, he had made up his mind to pay Miss Delamayn a visit; so one day he came to his mother, and said:

"Mother, I've worked pretty hard the past year, and we've saved a good bit of money. It is a-going to be a hard Winter, and I sha'n't be able to do much work in the woods; so I have made up my mind, if you'll have no objection, to go and visit Miss Fanny."

"None at all, Reuben; go right along. The trip will do you good," said the widow; and so it was settled between them.

Accordingly, he ordered a new suit of clothes throughout, which, if not of the most fashionable fabric, fitted his fine form to perfection, lending grace to his erect, stately carriage.

"I reckon Miss Fanny will feel right proud when she sees me in these clothes," he remarked, as he stood before his mother in the garments.

"That she will," proudly returned the widow, gazing on her idol with adoring eyes. "Reuben," she continued, "I want to show Miss Delamayn that she's well thought of by us, so I've concluded to send her something by you that will be of use to her. Now, I might send her a nice story-book, but she's got a plenty of 'em, no doubt; so I'll jest send her some of them wine-apples she was so fond of, along with some nice fresh herbs, in case she's took with chills at any time. Now, here's two bundles—one of 'em pennyroyal, and the other boneset. They ain't nothing equals boneset tea for headache, and pennyroyal, as you know, is death agin chills and fever. You'll take 'em along with you, I s'pose?" she added.

"Of course I will, mother; but how will I carry the apples?" he queried.

"Well, I've thought of one of Uncle Caleb's willer baskets, but I'm afraid it would be unhandy, and a bag ain't good enough; so I think I'd better fill one of my best pillar-cases with them."

"The very thing!" cried Reuben. "It'll show our regard for her."

So the widow brought forth from the quaint old bureau one of the finest of her fine cambric pillow-cases, which she filled with the choicest of the wine-apples.

When all things were complete for the journey, Reuben gave his mother a good-by kiss and went proudly across the clearing, the well-filled pillow-case under his arm and a plethoric satchel in his hand, in which was carefully stored the invaluable pennyroyal and boneset.

By making a *détour* of some extent, he managed to avoid the Spriggins establishment and gain the station unseen by his fair foes.

Stepping proudly aboard the train, he secured a seat, and was soon speeding toward the home of his idol.

CHAPTER III.

Miss Delamayn was seated in a voluptuous easy-chair in one of the elegant drawing-rooms of her father's mansion, entertaining the two Miss Croftons, who had just called, when a servant announced a visitor.

"Who is it, Thomas?" she asked.

"It's a man, Miss Delamayn, and he looks a low person," said Thomas, with somewhat of contempt in his tone.

"Had he no card?" she inquired.

"No, miss; but he said that his name was Todd."

"Oh!" cried she, in delight. "Show him in at once, Thomas."

Thomas favored his mistress with a brief stare of amazement, and then retired. In another moment a cheery voice was heard in the hall, saying:

"Put it down kind o' easy, bub; that ere pillar-case is rather thin, and it won't stand much bangin'."

Miss Delamayn blushed slightly on observing that her visitors were regarding her rather curiously, but there was no time for explanations, as already Reuben stood in the door, wreathed in smiles, and she arose and advanced toward him with extended hands, her soft eyes beaming with delight.

"This is indeed a pleasure," she said, as he clasped her hand.

"I've kept my word, haven't I, Miss Fanny?" was his first remark.

"Yes," she answered, "and I knew that you would. How is your dear mother's health?"

"First-rate, thank you. She sent along some things for your comfort, so's you'd know she hadn't forgotten you. That boy of yours wasn't a-going to let me bring 'em into the house, but I told him they was expressly for you, and he gave over then. I'll go and fetch 'em

XUM

in to you afore he changes his mind and flings 'em out into the back yard."

And ere she could stop him he was out into the hall, whence he soon returned with the cherished herbs and the pillow-case—now sadly discolored by coal-cinders—containing the wine-apples.

For a moment or two Miss Delamayn was much embarrassed, nor was she at all relieved on turning to the ladies and finding them convulsed with laughter.

She gave them a quick, appealing glance, which, being well-bred ladies, they were not slow in acting upon; one of them taking up a portfolio of sketches, with which they were soon, to all appearance, deeply engrossed.

Much relieved, and deeply grateful to her friends, she turned to Reuben, who continued:

"Them bundles, Miss Fanny, is boneset and pennyroyal. They can't be beat for chills and headache. Mother thought you might need something of the kind, so she sent 'em along with a few of the wine-apples you was so fond of. That pillar-case was as white as your hand when I started, and I had no idee they was so much dirt on a train of cars."

"It was very kind of your mother to remember me thus," she returned, with perfect gravity, "and I shall enjoy eating the apples, I know. I will have them removed at once beyond the reach of Thomas, as I should not like them to be thrown away."

And she rang for a servant, whom she requested to remove the articles to a place of safety.

"And now," she continued, "let me present you to my friends;" and she led him forward to the now demure ladies.

"Mr. Todd, of Minnesota, ladies—the Misses Crofton, Mr. Todd."

"How d'ye do, ladies?" said he, warmly, extending his hand, which each in turn was courteous enough to accept. "I'm glad to meet you, and I hope we'll come to know each other right well."

For these expressions of goodwill the ladies thanked him gracefully, and, after a few general remarks were exchanged, Miss Delamayan begged him to tell them of the occurrences at his home since her departure therefrom.

Thereupon he proceeded to relate those incidents with which the reader is already familiar, dwelling at some length on his studies and the pleasure they had afforded him.

During his simple recital, his handsome, honest face grew so eloquent, and his language so suggestive of the gentleness of his nature, that the Misses Crofton were fain to acknowledge him a most charming person. And when, a little later, they took leave of Miss Delamayn, both gave him a cordial invitation to visit them at their home, which, of course, the delighted fellow readily accepted.

These ladies had long been on terms of intimacy with Miss Delamayn, and the fair trio were constantly getting their pretty heads together in the planning of such social events as might furnish a fund of innocent enjoyment to all concerned therein.

Now it happened that Miss Delamayn had announced a reception to take place on the evening following Reuben's unexpected advent, and she was therefore very naturally not a little puzzled as to how she was to present him to her many friends, albeit she was resolved that no slight should be given the man to whom she owed so much. She knew he had no dress suit, but she would present him as he was, and intrust the issue to the courtesy of her other guests.

Well, the eventful evening came, and with it a train of beauty and elegance that fairly dazed the simple fellow to behold. The great *salon* was resplendent with rich toilets, the heavy atmosphere was freighted with exquisite perfume, the music was bewitching, and the dance quite eclipsed anything of the sort ever dreamed of by him.

By dint of coaxing he was inveigled into a quadrille by one of the Misses Crofton, and, somewhat to her surprise, he went through the changes with considerable grace.

This achievement was so gratifying to him that he at once sought and won Miss Delamayn's hand for the next similar dance, which was gotten through with quite as smoothly as the first.

The guests seemed intuitively to understand his position among them, and were equally lavish with their good-natured attention to him.

Now, these civilities, together with his terpsichorean success, quite captured his senses, and led him presently into an imprudence.

One of Strauss's loveliest waltzes was being rendered, and the rhythmic evolutions of the dancers so stirred his simple soul that he resolved at all hazards to participate in the seductive maze.

Neither of his friends was to be had for a partner, being already engaged in the dance, so he set about to find one for himself.

At some distance from him, in a pretty alcove, was a group of three ladies. These he approached, and selecting one whose cold, proud face would have been a warning to a more experienced man, he bowed low to her and blandly remarked:

"Good-evening, ma'am, and excuse me if I am over bold; but wouldn't you like to try the waltz?"

The haughty beauty raised her scornful eyes to him in a little rage, while a low titter broke from the lips of her fair companions. Reuben was somewhat abashed at this display of high-bred superciliousness, and sought to remedy his error with a remark which, intended to be reassuring, only increased her wrath:

"You needn't be at all afraid, ma'am. I'm a little rough in my ways, but I won't harm you in the least."

This produced the threatened climax. The haughty beauty grew white with rage, and, arising and motioning her companions to follow her, she swept scornfully past him, leaving him almost stupefied with amazement and concern.

"Well," he exclaimed, following her with wondering eyes, "that's just a little queer! What's the matter with her, anyhow? I didn't say anything unreasonable, I'm sure."

Just at this moment a faultlessly attired, fiercely mustached little man approached him, and said:

"Ef monsieur please, he sall come into ze library wiz me?"

"Sartinly," said Reuben.

As he followed his diminutive guide, he reflected in this vein:

"I s'pose he seen I was kinder put out, and he's a doing this to relieve me. Kind of him, anyhow."

Arrived at the library, he was considerably surprised by the little gentleman turning upon him and saying, in a voice trembling with anger:

"Monsieur, I am ze Count Figary."

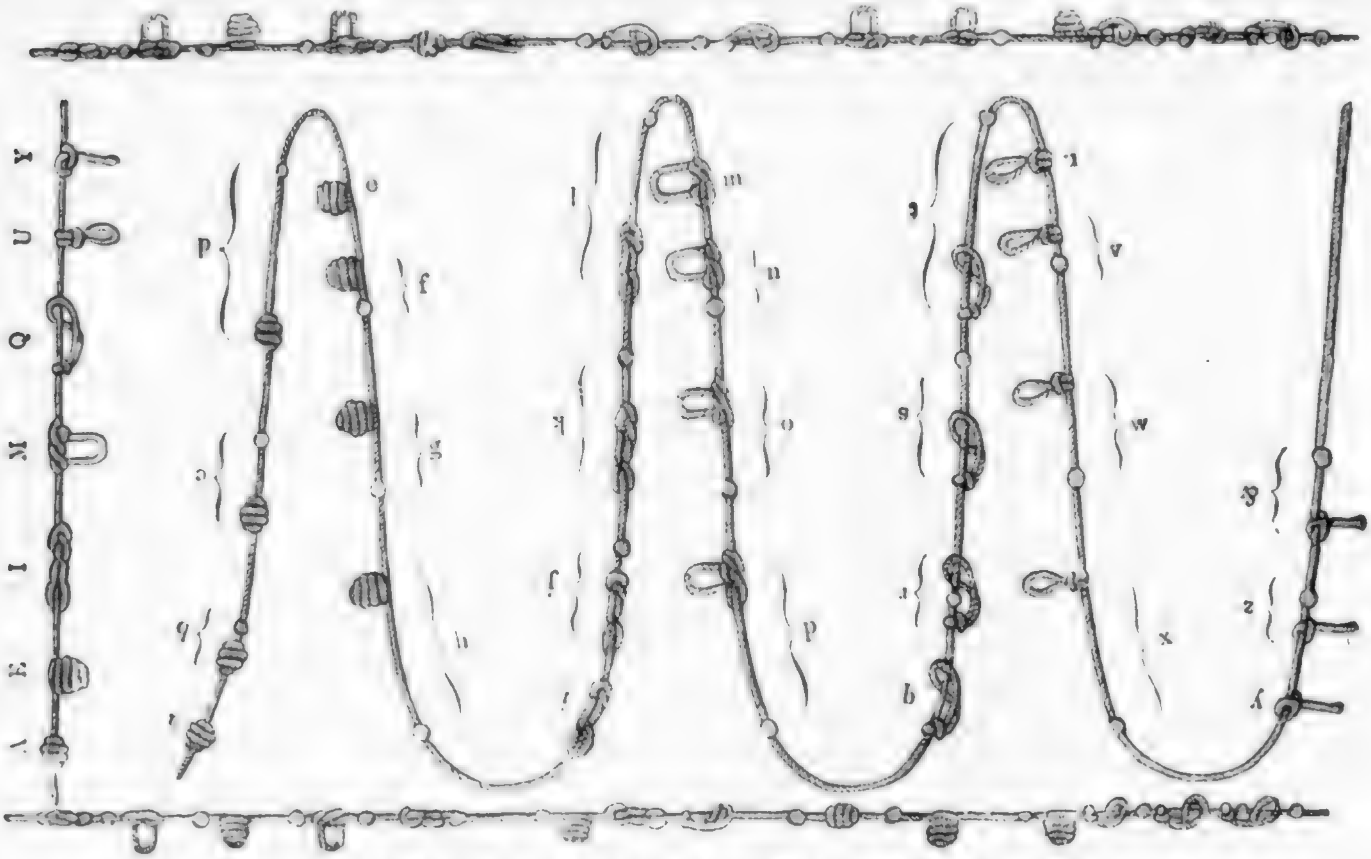
"Oh! be you?" said Reuben. "Well, I am Reuben Todd, of Minnesota, and I am glad to meet you."

He extended his hand to the angry count.

"Monsieur, you haf insult milady," said he, taking no notice of the proffered hand.

"Guess not; guess you're mistaken," replied Reuben, in surprise.

XUM



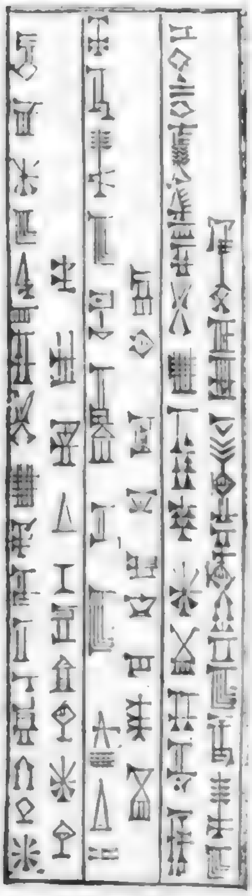
WHAT OUR MODERN BOOK GREW FROM.—PERUVIAN QUIPOS.—SEE PAGE 603.

"I haf wis my own eyes see you, monsieur, so I demande one satisfaczione!" cried the irate little Frenchman, stamping the floor in his rage.

"Oh, you do—eh? What do you want me to do?" asked Reuben.

"You shall go on your knee and make one apologee."

"Look-a-here, bub," said Reuben, gravely. "If I have hurt the lady's feelings, I'm right sorry, and am willing to say so to her. That's about all I can do in the way of a 'pology."



CLAY TABLET FROM NINEVEH.

"You sall go one time down on your knee," persisted the little man.

"Guess not—guess not," returned Reuben. "You're a little wild, bub, but you'll git over it presently."

And, saying this, he turned on his heel and walked away.

With a howl of rage, the irate Figary leaped upon him, striking him fiercely several times in rapid succession.

Reuben shook him off as he would have done a child, and, grasping his collar, lifted him free of the floor and bore him, struggling and kicking, to the open window, out of which he carefully dropped him upon the lawn below.

"There, you little varmint!" he cried. "Stay out there till you cool off. I could a-smashed you all up or pinned you on my shirt-front, but I've let you off easy on account of your size; so jest sit down on the grass and cool off, will you?"

And he closed the window and latched it, leaving his antagonist to glower in at him in a paroxysm of rage. He then sauntered leisurely into the *salon* in search of Miss Delamayn.

But Reuben was destined to further trouble with Count Figary, for presently there was heard a wild commotion at the entrance to the *salon*, and a voice crying loudly and excitedly:

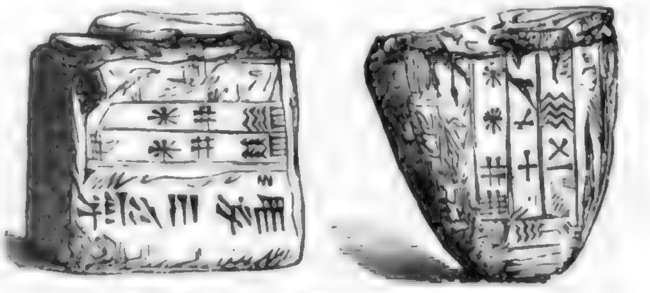
"Where he iss? I sall go not nevaire from zis place ontil I haf hees life!"

And the little fellow popped into the *salon* with the suddenness of a Jack out of its box.

"Aha!" he cried, as his scintillating orbs fell upon his foe. "Now I haf find you I will one satisfaction haf."

And he leaped at him with the fury of an enraged cat.

"What is the trouble, count?" inquired Mr. Delamayn, who had hastened forward at once that personage made his furious entrance into the *salon*.



TABLET IN CLAY AND INSCRIBED CLAY LUMP.

"He haf insult me ver mooch," said the count, pointing to Reuben.

And he proceeded, in an incoherent manner, to relate his wrongs.

Mr. Delamayn heard him through, and, turning to Reuben, coldly said:

"Leave my house, sir!"

"Why, I didn't hurt him!" he exclaimed, in amaze.

"Will you leave my house, or must I summon my servants?"

Reuben turned awkwardly to Miss Delamayn, who, with many of the guests, had been drawn to the spot, and she gave him a swift, imploring glance, which he could not but understand.

"Sartinly!" he said, in a low voice, and bowing gracefully to her, he turned away and hurried from the room.

Hastening to his hotel, he sat down and wrote Miss Delamayn a full explanation of the affair, which occupied him until the morning to finish.

This he posted at an early hour, waiting that day and the next for an answer.

But none came. Then, in despair, he started for his far-off home, which, with heart full of grief, he reached in due time.

"Mother," he said, after he had donned his old and toil-worn garments once more, and given her his holiday attire, "put them clothes out of sight—I've got no further use for 'em!"

Then he went into the woods, and, in spite of the deep snow, toiled as he had never done before.

THE PAPYRUS.

Chapter IV.

By the advice of Count Figary, Mr. Delamayn had invested large sums of money in certain foreign concerns which, according to the count, were sure to return huge profits.

They did another thing, however—collapsed very suddenly, and left Mr. Delamayn a penniless man.

It was an awful blow to him, and, being a coward, he succumbed to it with the help of a deadly narcotic.

These things happened soon after the taking place of the events recorded in the last chapter, and they quite broke the heart of the maiden sister, and when she was laid to rest by the side of her unfortunate brother, it was then that poor Miss Fannie Delamayn found herself alone and friendless in the world. Her wardrobe and jewels were all that remained to her, and, finding a room in another part of the city, she took up her abode there, and set out to teach music for her livelihood. But she soon learned the fact that there were better teachers than herself in the field, who found it a matter of difficulty to obtain pupils; and, after waiting in vain for some time for the pupils that never came, she gave it up and turned her thoughts to painting. But when, in quest of materials for the work, she paused before the plate windows of an "art store," and saw fine pictures sold at auction at prices below the frames in which they were hung, her heart sickened, and she went back to her lodging utterly disheartened.

CINGALESE WRITING ON LEAF OF TALIPOT PALM.

A whole month was spent by her in trying unsuccessfully to obtain a clerkship, and finally, in sheer despair, she engaged herself to make vests for Messrs. Isaacs & Schwart. Very bravely she began her task, but her poor little fingers grew sore and her soft eyes dim, and then her employers, by a species of juggling known only to their fraternity, caused numberless gaps to appear in the seams of the garments, and quite broke her little heart by magnanimously withholding half the price promised for the work.

Then she *was* disheartened, and remained shut up in her little room until hunger drove her to the pawnbroker, who, being nationally related to her late employer, displayed quite as little liberality in his loans on the costly articles tendered to him as they were in rewarding her toil.

TABLETS AND ROLLS IN CASE.

Why didn't she appeal to her friends, the Misses Crofton? will be asked. Well, they were in Europe; besides Miss Delamayn was proud, and already she had met with some coldness from not a few of those who had been her friends in the past.

One by one did her personal effects disappear, and the pawnbroker rubbed his fat hands gleefully as he counted the profits on each, and Miss Delamayn sighed often and wearily as she beheld her only means of support vanishing from her sight.

XUM

At length her wardrobe was reduced to two dresses, and her jewels to a not very costly solitaire ring. This latter she took to the human leech, somewhat thankful that it would be her last visit to him.

It was quite dark when she left the den, and she hurried homeward as fast as her limbs would carry her. She had not gone far, however, ere she grew conscious of the fact that she was being followed by a man. This discovery lent her wings of terror, and she almost ran along the dimly lighted walk. But her pursuer, too, quickened his pace, and, just as she reached her lodging-place, he overtook her, and grasped her arm as she entered the hallway.

With a cry of dismay she turned upon him and beheld the leering face of Count Figary. He was flushed with wine, but endeavored to hide the fact, and to allay her fears with some maudlin offer of protection.

But she broke away from him, and fled like a frightened fawn to her room. There she fell upon her humble couch and cried out aloud, in the bitterness of her despair :

"Oh, merciful Heaven ! has it come to this ? Reuben, Reuben, you are the only *man* I have ever known !"

For many hours she lay sobbing there ; but when her grief had finally spent its force, she arose and, bathing her throbbing temples, sat down to think how she might best escape her seemingly evil destiny.

"Let me see," she murmured. "I have yet a few dollars. They will provide me with food and lodging a few weeks only. After that I may lie down by the side of my dear ones and sleep with them. But, no ; there is something better for me. I will go to Reuben. He will never refuse me shelter, I know."

Thus it happened, one Autumn day, when the leaves were falling, that Miss Delamayn alighted from the dusty train in the little station where she had bid him Good-by two years before, and turned her pale face toward his humble home

She was weary and worn, and hungry, too ; for, poor child, her stinted means had barely paid the price of the ticket, and left her nothing wherewith to purchase food on the way. She was barely able to shape her footsteps toward the distant cottage where she hoped to find shelter.

It was three miles there, and evening was fast coming ; but for the sake of the sweet rest she knew would be hers at the end, she thought she would be able to perform the journey in spite of the darkness.

She went slowly along the old, familiar path with joy in her heart and the light of hope in her tender orbs.

She soon found, however, that she had overrated her strength, for, ere she had gone far upon the way, she was obliged to halt and rest her wearied frame.

Then the night came, and the deep wood grew dark and lonely, while grim shadows rose up before her at every step, frightening her with their weird shapes.

But onward she toiled, and when at length she reached the friendly clearing the great moon burst through the clouds, dispersing the ugly shadows, and lighting up the gloomy forest aisles suddenly and softly, as God's pardon ofttimes lights up a sin-sick soul.

There stood the dear old cottage, and the lamp-lit windows told her its inmates had not yet retired.

She grew weaker still at sight of it, finding it difficult to maintain strength enough to enable her to cross the narrow clearing. But, somehow, she gained the house, and, halting before a window, she peered within, and beheld that which gladdened her weary heart. Seated by the table, with book in hand, was Reuben—dear old Reuben ! He was much changed in appearance, though, and was evidently suffering in mind.

The sight of his pale and careworn face brought a pang to her heart.

"Reuben !" she called, in a low, hoarse whisper.

He started at the sound of her voice and glanced nervously about him ; but, thinking it only fancy, he resumed his studies.

"Reuben !" she again called, this time with all her strength, which was little enough.

He sprang to his feet as if shot. His quick eye met the white face at the window, and, with a great cry of joy, he darted out of the door and caught her up in his arms.

He saw that she was suffering, and bore her quickly into the house, where, still holding her, he fell on his knees and began smoothing her damp tresses and uttering words of endearment to her.

"Reuben," she murmured, faintly, "you are all that is left me now."

"Oh, my poor little one !" he answered, still stroking her hair. "Mother ! mother !" he cried ; "Fanny has come back to us ! Come and welcome her."

Soon the widow made her appearance, she having been a-bed, and immediately took the weary one in charge.

"Build a fire at once, Reuben," she said, "and fetch some of the alderberry wine from the cellar along with some fresh eggs. Make haste, for the poor child is starvin'—I can see it in her baby face."

Very soon there were tea and toast and eggs, and other good things, in abundance, ready for the half-famished girl, and when she had partaken freely of them, she felt her strength return.

Then she told her story, and from it Reuben gathered that she had never received his letter of explanation.

But little remains to tell. Reuben has married his darling, and both are supremely happy.

He has erected a great sawmill over the site of the rapids, and a new railroad has increased the population and business of the little town to that extent that his mill is kept running both day and night to supply the demand for lumber.

He is making a fortune rapidly, and has risen somewhat socially, for only recently he was elected town supervisor, and the good citizens thereof are much elated over their choice of candidate.

THE GREAT SPHINX.

THE *Times* prints an account of the excavations made, under the direction of M. Grébaut, with the object of clearing the sand which a year ago had buried the Great Sphinx almost to the throat. The last occasion on which the Sphinx was cleared down to the level on which the paws rest was in honor of the opening of the Suez Canal in 1869. The work of excavating is at the present time in active progress. Already the entire fore part of the great stone monster is laid bare, and the huge chest, the paws, the space between the paws, the altar in front of them, and the platform upon which they rest, are once more open to the light of day. Nor is this all. Between the Sphinx and the edge of the Pyramid Plateau a vast space has been cleared, thus bringing to view a fine flight of steps some 40 feet in width. These steps, which are described by Pliny, were uncovered by Caviglia in 1817, but have since been entirely lost to sight. From the level of the area below the great flight of steps (which lead down and go up to the Sphinx) one now measures the whole height of the huge human-headed monster,

XUM

whose battered countenance stands out against the cloudless sky 100 feet above. The space between the paws is 35 feet long and 10 feet wide. This space was anciently converted into a small sanctuary lined with votive tablets, only one of which—the famous stela of Thothmes IV.—yet remains *in situ*. The tablet stands 14 feet high, and is cut from a block of the same red granite of Assouan whereof the neighboring Temple of Khafra is built. The granite altar between the paws is of the same syenite, and most probably came from the same convenient quarry. This last, however, is of Roman work, very roughly executed. The paws of the Sphinx, as they now appear, are a restoration of Roman date, being cased in comparatively small slabs, and to some extent hollow underneath. The breast of the Sphinx has likewise been faced with slabs, apparently in Roman times, and these slabs have again been repaired by cutting away the weathered surface and inserting a fresh facing.

Like the legs of the Colossi of the Plain, and those of the statues at Aboo Simbel, the paws of the Sphinx are covered with the Greek scrawls of early travelers.

WHAT OUR MODERN BOOK GREW FROM.

ITS ANCESTORS OF STONE, BRICK AND PAPYRUS—THE FIRST SQUARE BOOK.

A SMOOTH, flat bone, a bit of rude flint—these were the writing materials with which prehistoric man made the books that adorned his cavern home in the rocks or clay banks; rude drawings of the chase, far inferior in correctness of outline to the symbols and pictures painted on skins in red and ochre by North American savages. The most diligent explorers have rarely come upon human beings so low in intelligence as not to be able to record ideas of number by means of marks or notches. True, in a very limited way, scarcely above the mental effort of a two-year-old child, but sufficient to prove that man almost from the very first was a sort of automatic recording machine.

This instinctive desire to set his mark upon things developed rapidly into an intelligence. From the smooth surface of a bone, a bit of bark, a piece of hide, his picture writings extended, so to speak, to the broad pages of stone and clay which nature opened in his presence. Probably one of the first pages of stone written upon by man was the slab or tablet set up to mark the resting-place of a dead chief, with its rude symbols of his strength and prowess.

The first literature of a people is its laws. The page upon which they are written must be enduring, itself a symbol of the weight and lasting character of the statutes. Hence the stone tablet, in ancient times, served as the only book necessary for the people. To carry records of the past, ingenuity led to more portable plans, like the Quipos of Peru. But with the growth of the priesthood and a consequent necessity for a more readily manipulated writing material to set forth the mysteries of the cults, man turned his thoughts to the ever-present and impressionable clay. He saw that his own and the footprints of animals on this material, when hardened by the sun, were almost indestructible. He also discovered that he could fashion this plastic material into plates or tablets of any size and weight that might please him. The clay book may be aptly termed the great progenitor of our modern book. Three thousand years before our era, men learned in natural history and astronomy wrote down their thoughts in these clay books. In clearing away the ruins of ancient Nineveh extensive libraries of clay books were brought to light, composed of oblong tablets covered with a writing so close and fine as to require a glass to decipher their outlines. The cuneiform, that is, "wedge-shaped" or "arrow-headed," characters of the ancient Chaldeans, were written or impressed upon soft clay tablets, which were then baked in the heat of the sun. When a book consisted of a number of tablets, the last line on the tablet was repeated on the next tablet. Each tablet or book was numbered, and had a place assigned it in the library, marked by the same number as the book itself, so that the librarian might readily lay his hand upon it. The entire literature of the Assyrians and Babylonians was contained in these clay books. India used, as she uses to this day, the leaves of the talipot palm as writing material, furnished by Nature's hand, with no necessity of human adaptation. Upon entering ancient Egypt the descent of the book was ennobled by the substitution of vegetable paper, or papyrus, for the heavy and unwieldy leaves of clay.

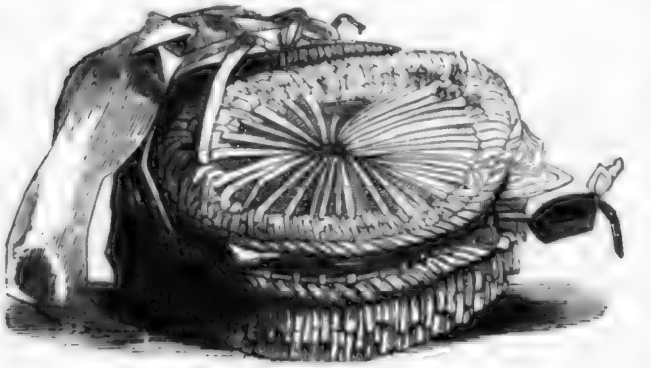
Henceforth the book will be lifted from earth, so to speak, upward to man's head and heart, to be for ever a comfort and a consolation to him. The most ancient monuments of the Egyptians bear witness to the use of this wonderful vegetable film as a writing material. Glued together and rolled upon itself, it was destined for ages to receive the thoughts of the learned men of Egypt and then pass still onward and westward, entering Europe through Greece, and reaching Rome in time to be wrought into the Sibylline Books, and later to have inscribed upon its surface the glowing periods of a Cicero and the soft measures of a Virgil and a Horace.

To Alexander the Great is due the honor of recognizing the wonderful utility of this paper, and encouraging its general importation into Greece, and not until the twelfth century did it finally disappear from the book-rooms of monasteries and shops of transcribers, supplanted by its great rival, parchment, which had entered the field as a book material as early as 200 B.C., and been a favorite with authors and bookmen on account of its great strength and durability.

Greece and Rome preserved the book in its roll form, about as they received it from the Orient. But they beautified its exterior to a wonderful degree, ornamenting the ends of the stick upon which it was rolled with ivory. The title was either suspended like a ticket by a silken cord or pasted on the outside. Gold, vermilion, blue, green and yellow were the colors used to paint initials, signatures, margins and end pieces on these rolls, more especially when the bookmaker was working upon parchment. The ancient book-room, which the architects took delight in ornamenting with marble, gold, ivory and glass, somewhat resembled our modern "map-room," for the ends of the rolls alone were visible.

The question which now arises is: How, in the further descent of the book, will the wonderful transformation, from the continuous roll of papyrus or parchment, varying from one to thirty feet, to the present square shape with leaves and covers, be effected? Looking back now to those distant ages, it seems as if nothing short of a miracle could have brought about this change, and yet it came about so easily and naturally that for several centuries the roll form and square form continued to exist alongside of each other in perfect peace and good understanding.

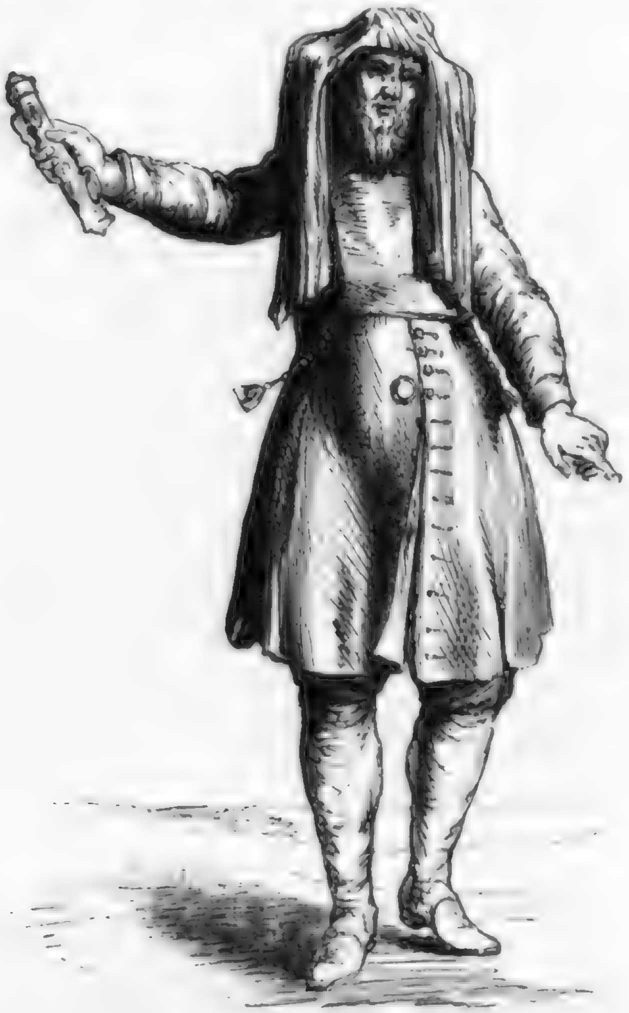
The roll form continued in use during the Middle Ages, for certain kinds of books, especially charters, constitutions, statutes, etc.



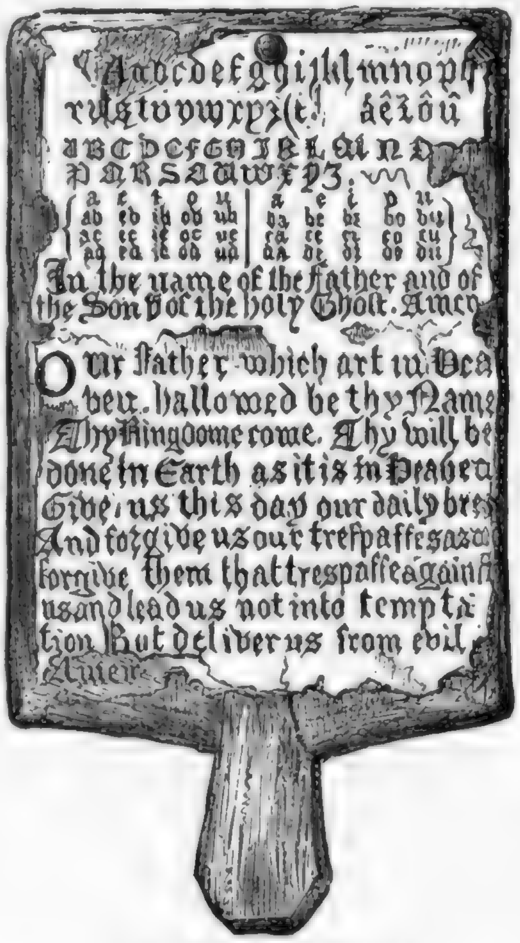
SKIPPET USED IN ENGLAND TO HOLD ROLLS.

But to resume: It had been the custom of the early Romans to put their treaties on wax tablets, which were bordered with silver. Sometimes whole books were written upon ivory tablets; but the most usual form of the tablet was the diptych or two-leaved tablet. The consuls, upon assuming office, were wont to send these diptychs, containing their names and portraits, to their friends. Lovers also made use of them to write their letters. Ordinary diptychs were made of boxwood or maple, while the wealthy demanded richer materials, such as ivory or silver, even gold.

When necessary another leaf was added, forming a triptych. It will be seen now that a marriage is drawing near. The roll is about to be wedded to the triptych, and the issue of this union will be a veritable book! Very naturally, the addition of several *metal* leaves would so increase the weight of the tablet book as to render it unfit for the very uses for which it was designed. Hence the substitution of papyrus and parchment leaves for metal ones. The outer pages of the tablets, which had always been ornamented with carvings, mosaics, etc., became the *covers* of the young book, to protect its delicate pages, and lo! the metamorphosis is complete! The early Christians took up this form for registers, annuals, etc., ornamenting their covers so richly that they were laid upon the altars as sacred objects.



A HEBREW SCROLL IN CASE.



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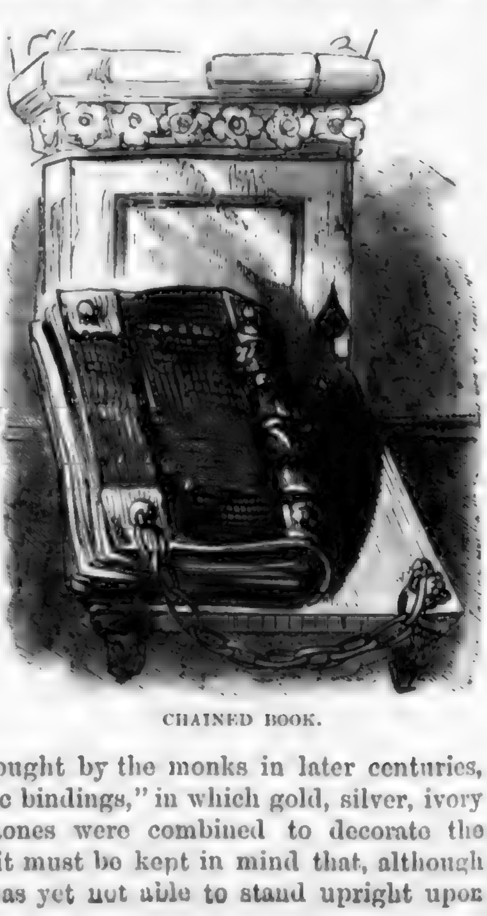
In the name of the Father and of
the Son & of the holy Ghost. Amen

Our Father which art in Hea
ven. Hallowed be thy Name
Thy Kingdome come. Thy will be
done in Earth as it is in Heaven
Give us this day our daily bre
And forgive us our treſpaſſes as w
forgive them that treſpaſſe againſt
us and lead us not into tempta
tion But deliver us from evil.
Amen

OLD-FASHIONED HORN BOOK.

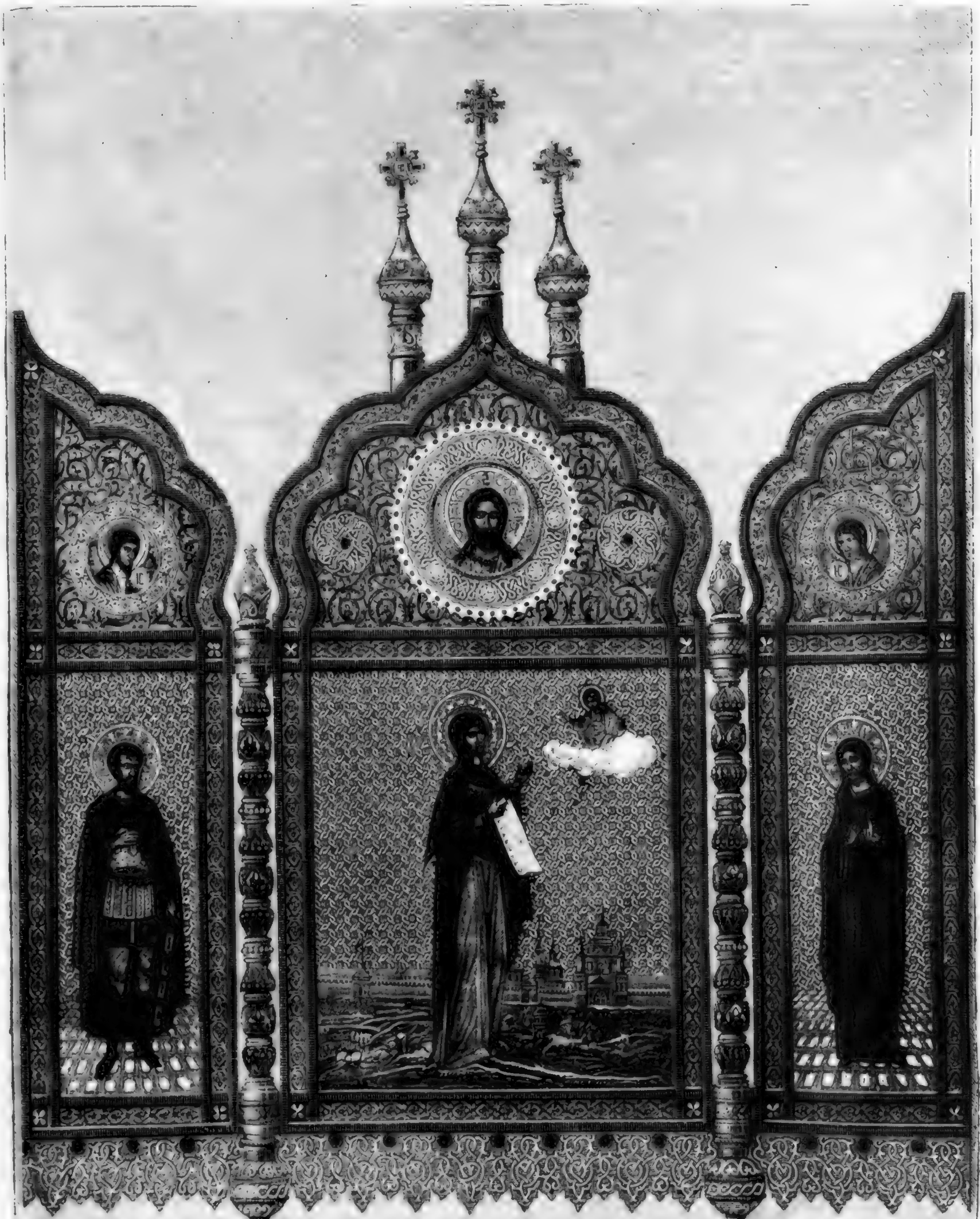
Here we find the origin of those rich bindings wrought by the monks in later centuries, termed "monastic bindings," in which gold, silver, ivory and precious stones were combined to decorate the *upper cover*—for it must be kept in mind that, although *born*, the book was yet not able to stand upright upon



CHAINED BOOK.

its edges. It will be centuries yet ere this comes to pass.

During the seventh century, our old friend papyrus begins to yield its place entirely to parchment, which was now written upon both sides, and at the beginning of the tenth century we find an entirely new substance between the heavy covers of monastic books. It was at first made from cotton fibre, but after the lapse of 200 years more, linen was substituted, and the genuine paper of to-day made its appearance. Its coming marks an important epoch in the descent of the book. But still one more propitious event is still lacking—to wit, the invention of printing, and then the perfect book will shed its heavy covers and stand upright like a thing of light and life. But before this happy day dawned, several attempts were made to supplant, or, rather, supplement, the written book. It was the awakening of that sublime idea which was destined to change the whole face of the globe.



A TRIPTYCH.

This was the appearance of the block book, so called because it was printed from a block, or blocks, upon which rude pictures—generally of a devotional character—were cut, together with the descriptive text. This kind of "book-making" was undoubtedly of Chinese origin, and was introduced into Europe by Venetian traders.

In the twelfth and thirteenth centuries "block books" were very common in Italy, Germany and the Netherlands. One of the most famous of them, the "Poor Man's Bible," contained about fifty pages, filled with Biblical scenes and incidents. About 1450, Gutenberg completed the printing of his first book—a Bible—from movable type, and the occupation of the transcriber was gone for ever. But many years must elapse ere books become so plentiful that it will not be necessary to chain them to the reading-desk. This custom, which dates as far back as the fifth century, continued in existence down to the last century, although, of course, in rare cases only.

In the fifteenth century whole libraries were thus secured. Books so chained were termed *catenati*. The volume was attached by chain and padlock. The chained directory of our day is a survival of this custom. The covers of manuscript books, when not decorated, were usually in plain oak, sometimes covered with hog's hide, with corners strengthened by metal plates, while branching hinges and bosses covered the entire book. The weight of such a volume may be imagined. Petrarch, who was accustomed to rest the "Epistles of Cicero" upon his leg while reading, so injured it that the necessity of amputation was actually threatened.

But with the advent of printing, the huge manuscript books, with their ponderous covers of oak, soon ceased to make their appearance. The strong, tough "pasteboard," covered with calfskin or morocco, took their place, and, even now books thus covered, which were printed and ornamented three centuries ago, are still fresh and beautiful. The descent of the book was complete; ennobled and refined by the skill of man, it has reached perfection. There is no necessity, there is no possibility, of further development.

But the book beautiful of the sixteenth century, in the wildest dreams of its makers, was never thought capable of increasing and multiplying to such an extent as to reach the masses of the people. And hence the various makeshifts of the early printers to supply this want.

They took the form of broadsides, almanacs and chap books. The broadside, which has long since ceased to exist, save in the form of "posters," was, in the good old days of Queen Bess, a thing of light and life, varying in its contents from a ballad, a prayer, the dying confession of a criminal, to the proclamation of a new king. Of course it was always printed on one side only, but on so large a sheet, and so closely printed, as to hold quite a bookful.

The almanac is likewise a very ancient style of book, dating back to 1491. It was not only a calendar, but a genuine booklet for the people, telling them what to eat, drink and wear; how to guard against the plague; how to educate children, and predict storms; together with the names of saints, dates of festivals, etc. The "chap book," so-called from being sold by "chapmen," or peddlers, made its appearance early in the seventeenth century. It was an attempt, and a successful one, to make books for the people. These small volumes, in pamphlet shape, treated of a vast number of subjects, from the lives and deeds of martyrs, heroes, giants and witches, to the art of fortune-telling, weather-forecasting, proverbs, wit and wisdom, discomforts of married life, national eccentricities and absurdities. Wandering peddlers and hawkers frequented markets, wakes and fairs, and disposed of vast numbers of these chap books. The last quaint type of booklet for the people that requires a word of mention at our hands is the "horn book," a curious contrivance, consisting of a sheet of printed matter fastened to a piece of board, with a handle, and covered with mica or horn, hence its name of "horn book." It was a sort of primer for the people, and first made its appearance in the fifteenth century. Block books, chap books and horn books all served their purpose well, but thanks to the invention of the steam printing press and paper-making machine, books have been so cheapened that the most glorious productions of human genius now gladden the humblest homes.

OUR KNOWLEDGE OF THE DEEP SEA.

Professor Angelo Heilprin says that while oceanography is an old science, our present accurate knowledge dates from the present generation. Four hundred years ago nothing was known of the Pacific Ocean, and one hundred years ago we, for the first time, had an approximate appreciation of the relations of land and water. The proportion of land to water was considered to be as six to one, and in 1810 calculations were made to show that the earth could not be more than as one to two as compared with water. The process of measurement, however, is very slow, and it is only over a limited portion of the earth's surface that it has been carried. Present knowledge on the subject, however, places the absolute proportions as 1 to 2.76.

Next, considering the question as to the nature of the trough of the sea, Professor Heilprin referred to Von Humboldt's theory that the water had made its own excavation as one that was untenable; and as to the remarkable theory that the mass of the moon represents the substance taken away from the earth, and thus forming the trough of the sea, he said that there was not a particle of evidence in geology to confirm it. He believed that the folds formed by the trough of the sea were due to the shrinkage of the earth's crust. The lecturer went on to say that there is not a single portion of the ocean bed having an extent (excepting in a few instances in the cases of volcanic islands) of precipitate shore cliffs where the rise and fall exceeds a gradient of one in five. Our knowledge as to the depth of the ocean, also, is quite recent; the soundings showing an average depth of 12,000 feet, and 27,000 feet as the greatest depth.

Three peculiarities of the ocean bed which were pointed out were the regularity of the plateaus, the absence of abrupt promontories and the enormous elevation to which some of the promontories raise. The level character of the ocean plateaus, Professor Heilprin said, is due to the absence of those carving processes which are at work upon the land, the gradual leveling down resulting, not from the currents, but from the gradual accumulation of organic and inorganic material which has succeeded in finding a level. The remarkable character of the prominences on the ocean bed was pointed out, one of the peaks in the Sandwich Island rising to a height of over 30,000 feet from the ocean bed, a greater elevation than any in the Himalayas. The configuration of the ocean bed and the gradual descent to the greatest depths were briefly described.

The depth to which solar light penetrates into the ocean has been found to be only about 400 meters, or about four times as great as in the clear lakes of Switzerland. However, it is not impossible that a peculiar kind of illumination may penetrate to greater depths, and it is not the case that absolute darkness reigns in the deep sea. Phosphorescent light is found to be given forth by fishes, as well as from the lower forms of life. Professor Heilprin next touched upon the color of the ocean and of lake waters. He said that Professor Tyndall's researches show that the black tint that is the characteristic of some water is due to the absorption of all rays of light; the blue tint is due to the absorption of some rays and the reflection of others, and the green and yellow tints indicate the presence of sediment in the water. The ocean water has a color of its own—a light blue, and the green effect is due to the reflection of yellow light-rays mixing with the blue; a yellow color shows considerable quantities of sediment, which overcomes the blue and green or blue alone. Until fifteen years ago it was the idea that the sediment from the earth was deposited all over the ocean's surface, but this is found not to be the case, the deposit being distributed along a very narrow line of from 200 to 300 miles.

The oceanic fauna is divided into three classes, the Littoral, the Pelagic and the Deep Sea. Theories as to animal life at great depth were disbelieved thirty years ago, experience having shown that along the coast line there was a rapid decrease of life from the surface, and the calculation was made that the zero point would be reached at about 1,200 feet below the surface. The rupture of the Mediterranean telegraph cable, however, settled the question, the ruptured ends showing that at a depth of 7,000 or 8,000 feet there were incrustations of coral life and living shells of various kinds. Now we know that animal forms are found at 17,000 feet, including nearly all the principal types, sponges, corals, worms, crustaceans and fishes—the greater number of them being merely modifications of the forms found on the surface. A distinctive feature is found in the looseness of the tissues, due probably to the amount of pressure to which they are subjected, it having been computed that at a depth of 12,000 feet, or less than the depth at which fish have been found, a man's body would be subject to a pressure equal to that exerted by twenty locomotives each drawing a train of cars loaded with iron.

In order to explain how these delicate forms exist under such pressure, Professor Heilprin compared the pressure to that of the atmosphere, it being exerted in all directions and from what is practically an equilibrium. In conclusion, the lecturer referred to the calcareous deposits which cover the ocean bed over a greater part of its surface, representing the accumulation of tens of thousands of centuries, and to the red-clay deposits found at 17,000 feet and below, the shell deposits disappearing within a distance of about a thousand feet. As to the theory of the alternation of the land and sea, he said there was no doubt that the land was covered by the sea, but that there was ever land where there is now the sea there is no evidence up to this time.

THE HOUSE OF HOHENZOLLERN.

The royal house of Hohenzollern springs from Count Thassilo, of Zollern, one of the generals of Charlemagne. His successor, Count Friedrich I., built the family castle of Hohenzollern, near the Danube, in the year 980. In 1415, the head of the family obtained possession of the Province of Brandenburg, and two years later was recognized as an Elector of the Empire. A century later, the Province of Prussia came into the possession of the family, through the election of Albrecht, a younger son, to the post of Grand Master of the Province. This, together with the additions to the family possessions made by Friedrich Wilhelm in the seventeenth century, encouraged the son of the "Great Elector," to crown himself king at Königsberg, January 18th, 1701, under the title of Friedrich I. From this time forward the dominions of the kings of Prussia steadily increased, until, after the war of 1866, the kingdom covered 137,066 square miles, with a population of nearly 23,000,000. With this growth in power came the natural rivalry with Austria. As far back as 1833 Prussia had formed the Zollverein, or Customs Union, of the German Powers, excluding Austria. This was small loss, financially, to the great empire of Austro-Hungary, but it constituted a tie between Prussian and other German states, and threatened Austria's position as head of the German Confederation. This led to numberless jealousies and bickerings, until finally, in 1866, Prussia determined to exclude Austria from the Confederation. The victory at Sadowa, July 3d, settled this question, and Prussian influence became supreme in Germany; so that during the Franco-German War of 1870 King Wilhelm became Emperor Wilhelm I. of a newly organized German Empire.

THE SMALLEST KINGDOM.

There is a little European kingdom named Tavolara, the King of which, Paul I., died only a few months ago, full of years and honors.

Off the northeast coast of the Island of Sardinia lies the much smaller Island of Tavolara, five miles long and one broad. Its possession and absolute sovereignty were formally granted by King Charles Albert of Sardinia to the Bartoleoni family, and for more than half a century Paul I., King of Tavolara, reigned over it in peace. On the 30th of May last King Paul was compelled to go to the mainland to seek treatment for heart-disease. Finding that science was powerless in his case, the King returned to his island to die in the midst of his subjects, who are forty in number. He died sitting in his chair, like the Emperor Vespasian, vainly endeavoring to write a will.

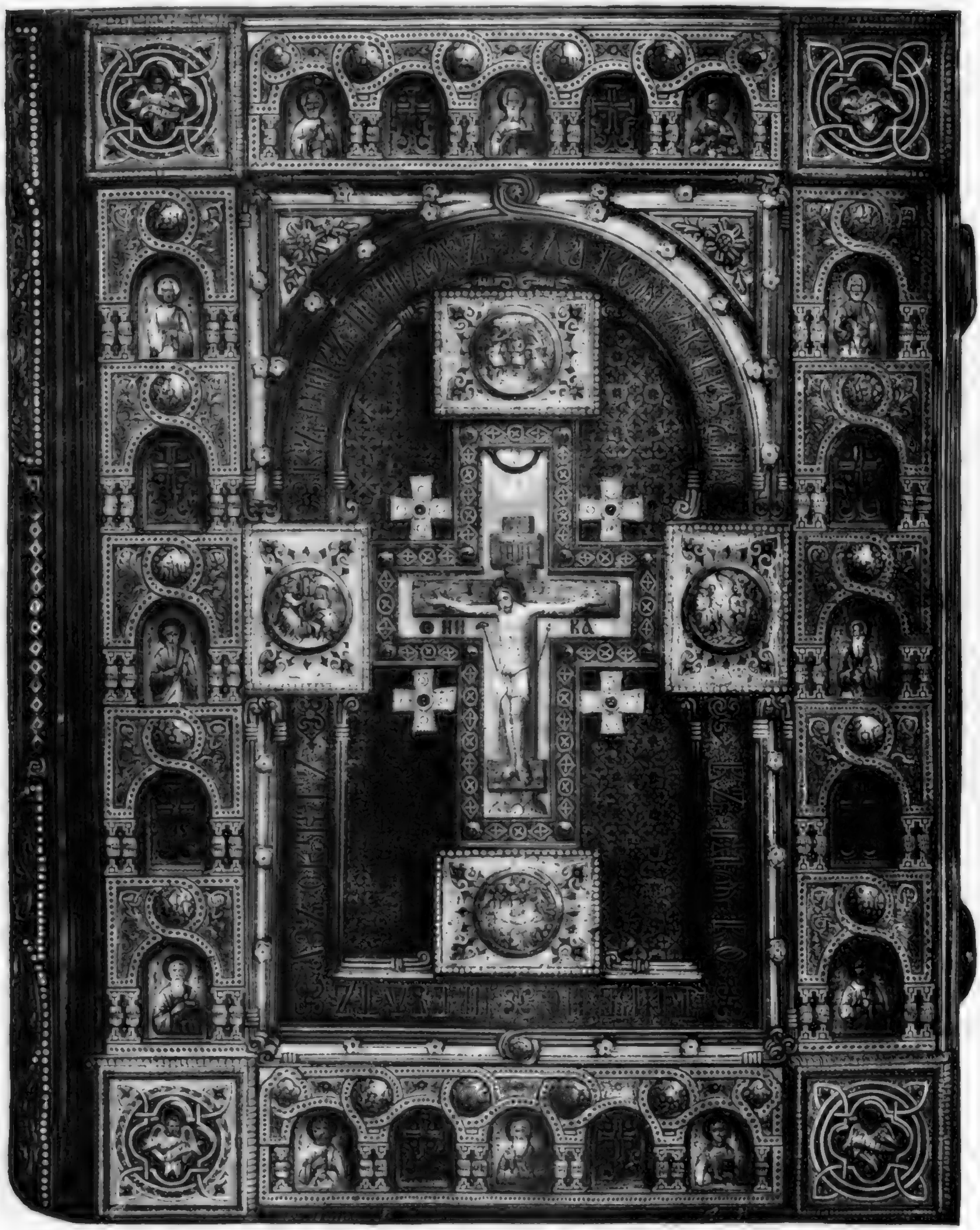
He was seventy-eight years old. The forty subjects of Re Paolo, as they called him, lost in him a benevolent and industrious monarch; his family lost a kind father; and the wild goats of the island, more numerous than his subjects, lost—we will not say they mourn the loss of—an intrepid hunter.

A CHARMING CARLYLE LETTER.

Among the newly published Carlyle letters is this altogether delightful note from him, in his twenty-sixth year, to his sister of eleven: "Dear Little Jane: Thou never wrotest me any kind of letter, yet I would be glad to see one from thy hand. There is in that little body of thine as much wisdom as ever inhabited so small a space; besides, thou art a true character, steel to the back, never told a lie, never flinched from telling truth; and, for all these things, I love thee, my little Jane, and wish thee many blithe New Years, from the bottom of my heart. Does the little creature ever make any rhymes now? Can she write any? Is she at any school? Has she read the book we sent her? Tell me all this—if thou hast power even to form strokes—that is, to go through the first elements of writing. I am living here in a great monster of a place, with towers and steeples, and grand

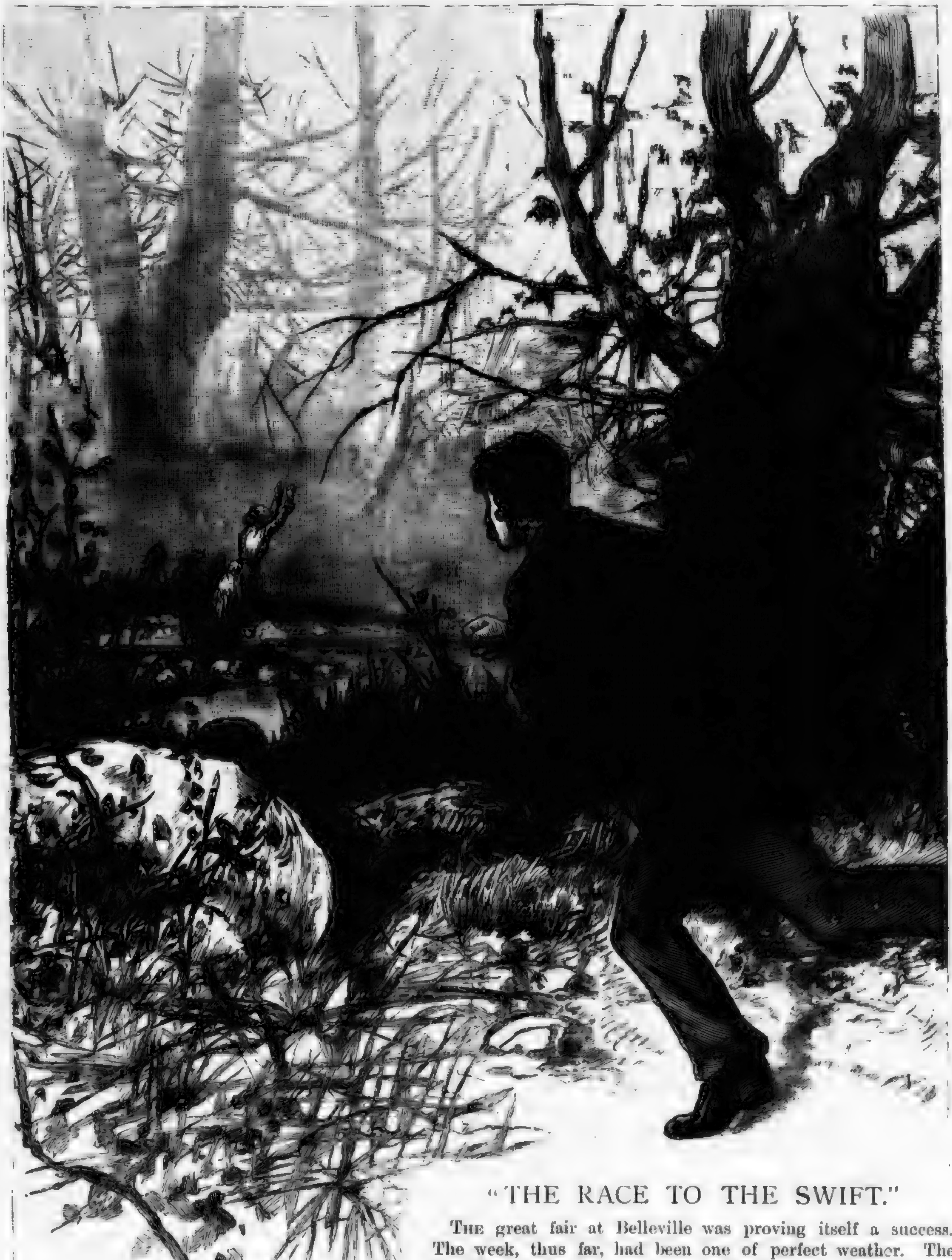
XUM

houses all in rows, and coaches and cars and men and women by thousands—all very grand; but I never forget the good people at Mainhill—nor thee, among the least in stature, though not the least in worth. Write then, if thou canst. I am very tired, but always thy affectionate brother, Th. Carlyle.—Give my compliments to Nimble, that worthiest of curs. Is Jamie Aitken with you still? I reckon him to be a worthy boy."



WHAT OUR MODERN BOOK GREW FROM.—RICH BOOK-COVER IN MEDIÆVAL STYLE.—SEE PAGE 603.

A Philadelphia genealogist, in tracing some early Pennsylvania families, contributes a bit of history interesting to New Yorkers. He finds among the early dwellers in the Delaware Valley the Murrays of Swatara, who were of Scotch descent, and appear first in 1732. They were Presbyterians, and active in the Revolutionary War; but Robert, a grandson of the emigrant, after going to North Carolina about 1750, came back, settled in New York, prospered as a merchant, became a Quaker, and, purchasing the tract of land known as "Murray Hill," gave his name to the fashionable centre on Fifth Avenue. It was his son, Lindley Murray, the Quaker, who wrote the grammar, prepared the spelling-book, and compiled the "English Reader."



"A QUARTER OF A MILE AWAY LAY THE POOL—DEEP, DARK, CALM. AT ITS EDGE STOOD OLIVETTE."

"THE RACE TO THE SWIFT."

The great fair at Belleville was proving itself a success. The week, thus far, had been one of perfect weather. The farmers had come in full force, and had been greatly pleased with the show of live-stock and machinery, while their wives and daughters had been delighted with the exhibition in "Floral Hall." The races had been spirited and exciting, and if they had not been perfectly square and honest, so few knew the truth that there was no lack of interest.

Thursday was almost done; Thursday, which had been designed to be the best day of the fair; Thursday, the day which had brought the largest crowd; Thursday, the day when the sky was fairest; the day when the temperature was perfect; the day when the track was fastest. All seemed happy—all but the reporter.

He was the reporter for the great daily in the great city. He had written glowing accounts of what there was to be seen on the grounds. His paper had grown in popularity. He knew that he had something to do with that fact. There was every reason, so far as one could guess from appearances, why he should be pleased.

But he wasn't. There was a frown on his face. He was captious and critical. He was inclined to find fault with everything.

I don't know what ailed the reporter. Perhaps the fact that he had been reporting country fairs for six weeks had something to do with it. Possibly his dinner had not been to his notion. It may be he had bet—— But it may be I had better not say that, even though I am sure that the reporter was only human.

The last race was a foot-race between two strong young men. One won, by a foot or so. I don't know which one. I don't know what their names were; who does know or care for those things, unless it is his business to do so?

The crowd cheered the winner. They looked scornfully at the man who had been a fraction of a heart-beat behind his fortunate rival; but they would have cheered him just as loudly and just as blindly if he had won. So goes the world.

The crowd rose to leave the grand stand. All had bright faces—all except the reporter.

"Why will men degrade themselves so?" he said, asking the question in a general way, which might mean that he was simply thinking aloud, or that any disgusted and sympathetic hearer might speak his feelings in return.

A tall, stout, grave-faced man took it upon himself to answer. His answer was a question:

"How have these men degraded themselves? Was not the race fair?"

"Perhaps so. In fact, I believe so. But what of it? Why will men spend time in training themselves to do what is so thoroughly useless?"

"Is it useless?" was the quick question.

"Isn't it?" returned the reporter.

"No, sir; it is not."

The answer was firm and the tone deep and strong; then leaning toward his antagonist in this wordy war, he asked:

"Did you ever hear of Tom Colleon?"

The professional instinct of the reporter flashed up into his eyes and face in an instant; it is the business of the newspaper man to know almost everything. And the reporter *did*, or thought so.

"Tom Colleon," he said—"of course I have heard of him. It was—eight—nine—let me see—no, it was ten years ago this Fall that he ran on this very track; made the best time any man ever made, too."

"Your memory is good——" commenced the tall, stout gentleman.

"Why shouldn't it be? I was here myself," interrupted the reporter.

"Sometimes," was the one word with which the gentleman finished his sentence. Then, after a pause, "Have you any idea what became of Colleon?"

"Not the slightest. I believe he never ran again in public."

"He never did. That was his first and only trial of speed for money."

"Then he went the to bad? Drank? Broke down under his training? Died of delirium tremens?"

"No, sir. None of those things. He is alive to-day. He is strong and healthy. He is rich and prosperous and happy."

"I'm glad to know that. I believe I had a very warm corner in my heart for Tom Colleon. I was younger, then. Besides that, how he could run! But haven't you rather overshot your mark? You started out to prove that such training as these men have undergone is not useless. Now you've admitted that Colleon only ran once in public."

"I didn't advocate racing. I advocated the training. I spoke in favor of a man being strong and swift; ready and able to do great things, and to do them promptly and quickly."

"All right. We'll discuss it from that standpoint. Colleon is alive and well and rich and happy. Why? Is it because he could run fast?"

"Yes, sir; it is because he could run fast," said the tall, stout gentleman.

I think the reporter started to ask whether Colleon had been in a war somewhere, and I know there was a twinkle of mischief in his eye, but something in the face of the other made him pause.

"Will you explain yourself?" he asked.

"Yes, I will," said the gentleman, with some emotion; "there is nothing that Tom Colleon valued that he did not save by means of his training, and the power it gave him. There was nothing which he could have risked on any chance or in any venture which he did not risk once upon a time on his speed. And he won, too."

"Nothing?" said the reporter, with a quizzical smile. "I am a great admirer of some of the heroes of the Revolution. Suppose I ask whether he ever ventured his life, his fortune and his sacred honor."

And the reporter laughed.

The tall, stout gentleman looked very grave and very serious. He laid the forefinger of his right hand very impressively on his left palm, and slowly tapped off the several points of his answer.

"His life, yes! His fortune, yes! His honor, yes!"

The reporter raised his eyebrows and looked incredulous. Something in the face of the other seemed to convince him.

"Will you take supper with me to-night, and tell me the story of Tom Colleon?" he asked.

The gentleman consented. This is the story he told:

"Tom Colleon was left an orphan at an early age. He was left poor—very poor. He had two uncles—brothers of his father, who were very rich. One was a bachelor; the other was a widower with two children, a boy of about Tom's age and a girl two years younger. The bachelor sent Tom to school, and later paid his expenses through college.

"One month after Tom's graduation, his uncle died suddenly; in the morning he was as strong and well as ever, so far as one could guess; at noon he was slightly indisposed; at nightfall he was under the care of two physicians; at midnight he was dead, and Tom had lost the best and wisest friend he had ever known, for his own father and mother had died when he was an infant.

"Every one had supposed that Tom would be his uncle's heir. Tom had expected it. He knew that his uncle had intended it. But the old gentleman's will read differently from anything Tom or his friends had guessed. Tom was given five hundred dollars a year, while the two cousins, Olivette and Jack, had just as much given them. But the great bulk of his fortune

XUM

went to a distant relative who had never been seen nor known by any of them. It is true that the will was an old one; true that it was dated when Tom was a little fellow almost unknown to his uncle; true that every one who knew anything about the matter knew perfectly well that there had been the fullest intention to make another will. Death had come; he had come suddenly; and the silent lips could never speak the love Tom knew had been his own; the pulseless hand could never write the words which would do Tom justice.

"Tom began life on his five hundred dollars a year. It was hard enough, for his uncle had allowed him to form expensive tastes—tastes for travel and books and pictures—tastes for elegant garments—tastes for pleasant leisure, and had always seen them gratified. And now Rupert Carlisle came to take possession of the old homestead, and Tom was cast out.

"I suppose Rupert Carlisle loved justice. I believe he thought the will which gave him the property he came to enjoy was a just one. I have little doubt that he might have asked Tom to share the old home with him, and to help him spend the income from the great estate. But an unfortunate thing happened—unfortunate if such an invitation were desirable—Rupert Carlisle's daughter fell in love with Tom.

"Ruth Carlisle was a handsome and showy girl. She was well educated, a good talker, a clear thinker, a deep, cool and crafty schemer, and as thoroughly unscrupulous a woman as ever the sky bent over. She believed in her personal power so fully that she never doubted that she would win the admiration and love of Tom Colleon, and, as sentimental modesty was entirely foreign to her nature, she did not hesitate to show just what *her* feelings were. She was astounded when she found that she had failed to kindle a responsive flame in the heart of the man she loved. Then she was angry. She never felt shame for having given her love unasked. Her determination to win never faltered. I fear that she swore a very bitter oath that she would succeed, and that she never hesitated at doing anything which promised to lead to success.

"Having failed to win Tom, she tried to buy him. She tried to secure him by the golden bribe of the property which should have been his. Her desperation got the better of her prudence one June evening, and she offered herself to him. Had she only been so unmaidenly as to offer herself, he would have pitied her; she was so brazen as to offer herself and her father's wealth, and he despised her.

"As gently as possible, but perhaps too gravely and positively, he refused her.

"She stood there, the pure, June moonlight falling around her, and making her beauty still more beautiful. The breeze was soft and balmy, and it had the perfume of flowers in its breath.

"Ruth Carlisle had chosen the best time possible for her venture. I shall not say that Tom was not tempted. Wealth, beauty, a slavish love—it would have bought the very soul of a false man. But Tom refused her. He thanked God that he had the strength to do that. He refused her.

"Then she cursed him. No more evil words ever fell from woman's lips. She called down all sorts of disaster upon him and the woman he might win. She told him that no other woman should ever be his wife. She bade him always remember that if he ever loved another she would keep them apart, and wreck the lives of both.

"When Tom left her that night, he thought he heard her weeping as only the utterly despairing can weep. If he heard aright, her tears brought her no good; there is nothing to show that she ever relaxed her determination to have vengeance.

"If Ruth Carlisle had not spoken, I presume that Tom would not have guessed at the love which was growing up in his heart until months had gone by.

"Her words showed him all. He was impulsive. He acted on his impulse.

"The evening after his stormy scene with her, he asked his sweet cousin Olivette to be his wife, and went to his happy dreams with the fond kiss of their betrothal on his lips. He did not tell Olivette what Ruth Carlisle had said. He believed it would not be necessary; he feared it would not be honorable.

"If Ruth Carlisle suspected the secret which the two cousins so carefully treasured, she certainly took a strange way to get her revenge. She suddenly became the warmest friend of Olivette Colleon.

"Tom necessarily saw her often. There was nothing in her calm manner to indicate what a storm had raged across her face so lately—nothing to show what a hell might be raging in her heart even then. No word that was not friendly ever passed her lips in those days. But there was a look in her eyes, sometimes, which should have been a lesson to Tom.

"How she read character as she did is a puzzle to all who knew her, or who knew the story of her and Tom Colleon. It seems almost as though she must have had supernatural powers to have decided so accurately just what Jack and Olivette would do under given circumstances. But she failed to count correctly on some things.

"Perhaps I cannot sum it up better than by saying that she failed in her estimate of just what Tom Colleon would do.

"She laid the foundations of her plans with fiendish ingenuity. She did nothing in a hurry. Your accomplished wicked man or woman never does.

"The weeks and months rolled on. Tom Colleon lived in a very fool's paradise. Why he was content that his promised wife should be an almost constant visitor at the home of the Carlisles is so puzzling a thing that I will not attempt to explain it. How it could be that he could bring himself to sit, as the honored guest of the house, opposite the man who had usurped his rightful place in the world, I cannot pretend to say. Why he was so blind as to allow a woman to swear vengeance on him in June, and be her friend in July, her intimate friend in August, her very intimate friend in September, and so on, I do not know. Tom Colleon does not know. But so it was. They cultivate vines on volcanoes, and scoffers at the cyclone's power live in sight of the ruin it has wrought.

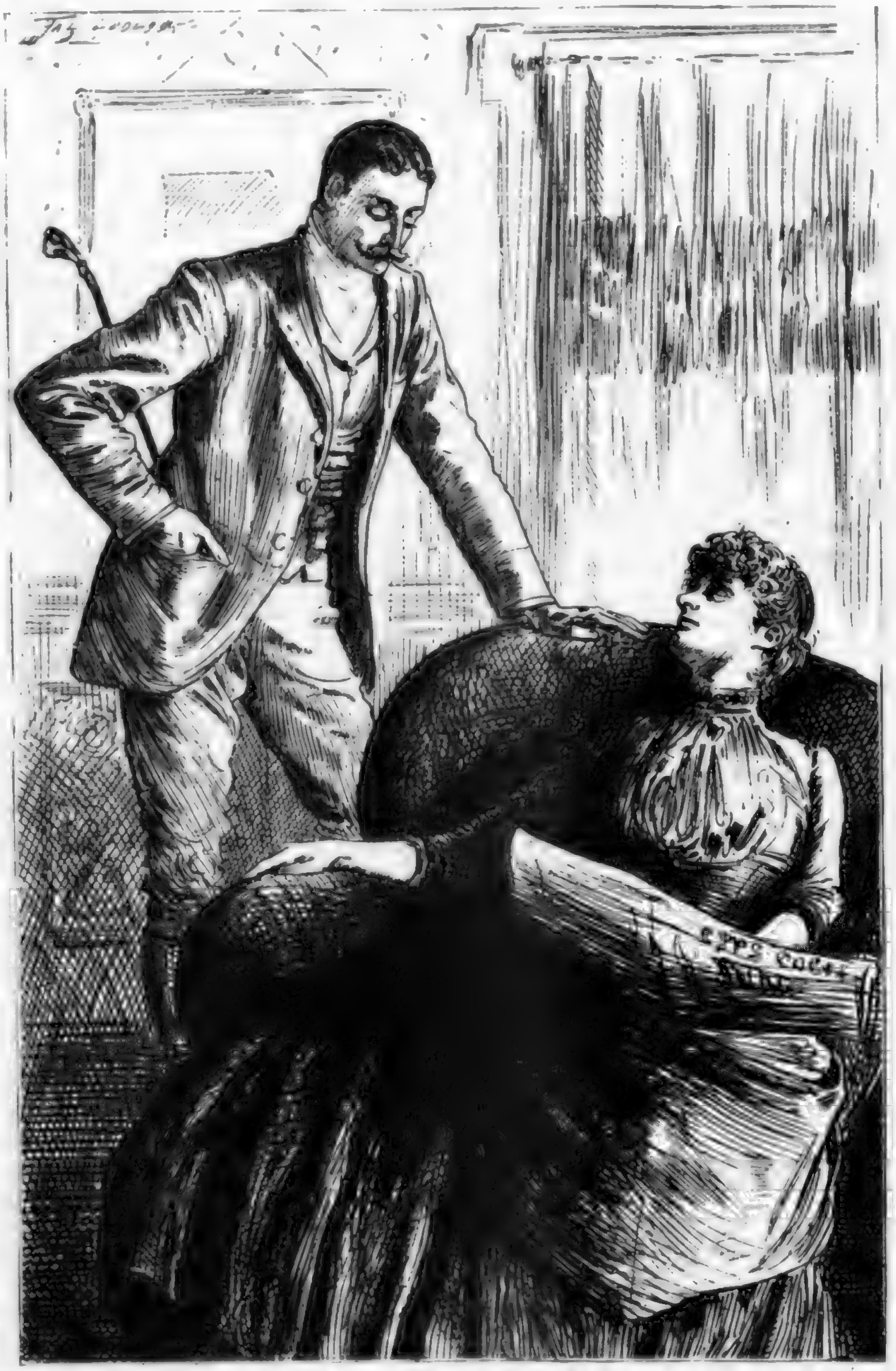
"Tom never guessed the life of wretchedness that Ruth Carlisle made Olivette Colleon live. Poor little Olivette! When she was with Tom she was trusting and happy; when she was away from him she was doubting and miserable. And all because her false friend had made her believe that Tom had wanted *her*, in the first place, and had asked Olivette for her love only after Ruth had refused him.

"Some girls would have gone to Tom and insisted on an explanation; some would have broken with him without even giving him an opportunity to explain. Olivette loved too well to do the latter; her belief in her own sweet self and in her own powers was too little to allow her to dare do the former. So the two lovers met with smiles, genuine and thoughtless on his part, forced and sorrowful on hers, and helped their bitter enemy to sow the wind in their lives for the fateful harvest of the whirlwind by-and-by.

"All were at the Carlisles' one Autumn day. The bright skies of October shone over them. The hopes of Springtime were things of the past; the heat and passion of Summer had burned itself out. It seemed to Tom that the unholy passion of Ruth Carlisle for himself had faded with the year. He forgot that the fever of the lava fires blazes on under the eternal ice of the north. He forgot that humanity is human. He forgot that the wayward heart is false and cruel. He forgot that sin watches while innocence sleeps, and that the greatest might which mere man has ever manifested is the might of wickedness.

"This October day was the time for one lesson to Tom. Perhaps Fate was disposed to be kinder than usual to him. Fate, did I say? Let us rather call it Providence.

"Dinner was over. Ruth walked away with Jack down into the garden. Tom was left with Olivette. It was not often that so strong and keen a mind as Ruth Carlisle's would allow matters to so shape themselves. Tom did not say to himself that there was a purpose in it. But he felt uneasy. Without knowing why, he made some trivial excuse to Olivette—an excuse which left her in tears as soon as the door was closed behind him—and followed Ruth and Jack.



AND SHE BOXED HIS EARS.

Wife of his Bosom (who doesn't hunt)—"POOR LITTLE FOX!—TO BE TURNED OUT OF HIS COVER THIS COLD MORNING."
John Peel, Jr.—"AH! BUT THINK OF THE FARMYARDS HE HAS RAVAGED IN THE NIGHT."
W. O. H. B.—"AND IS THERE ANY SPECIAL REASON WHY YOU SHOULD SET UP AS THE CHAMPION OF THE POULTRY?"
J. P. J.—"WELL, I'M CERTAINLY RATHER INTERESTED IN ONE LITTLE GOOSE."

"He found them in the garden. He was about to join them, when he heard words spoken which showed that he was the subject of their conversation. He turned to retrace his steps to the house, when something in what was said arrested his retreat. He remained and listened.

"'I would not trust him,' said Ruth Carlisle.

"'Why?' asked honest Jack.

"'Well, I happen to know that Olivette loves him. Did you know that?'

"'Oh, no, I never guessed it,' said Jack, 'but I don't see why she shouldn't. He's a grand, good fellow!"

"'Yes—perhaps—so,' said Ruth, slowly, and somewhat bitterly; 'but why don't he tell you and her father of their engagement?'

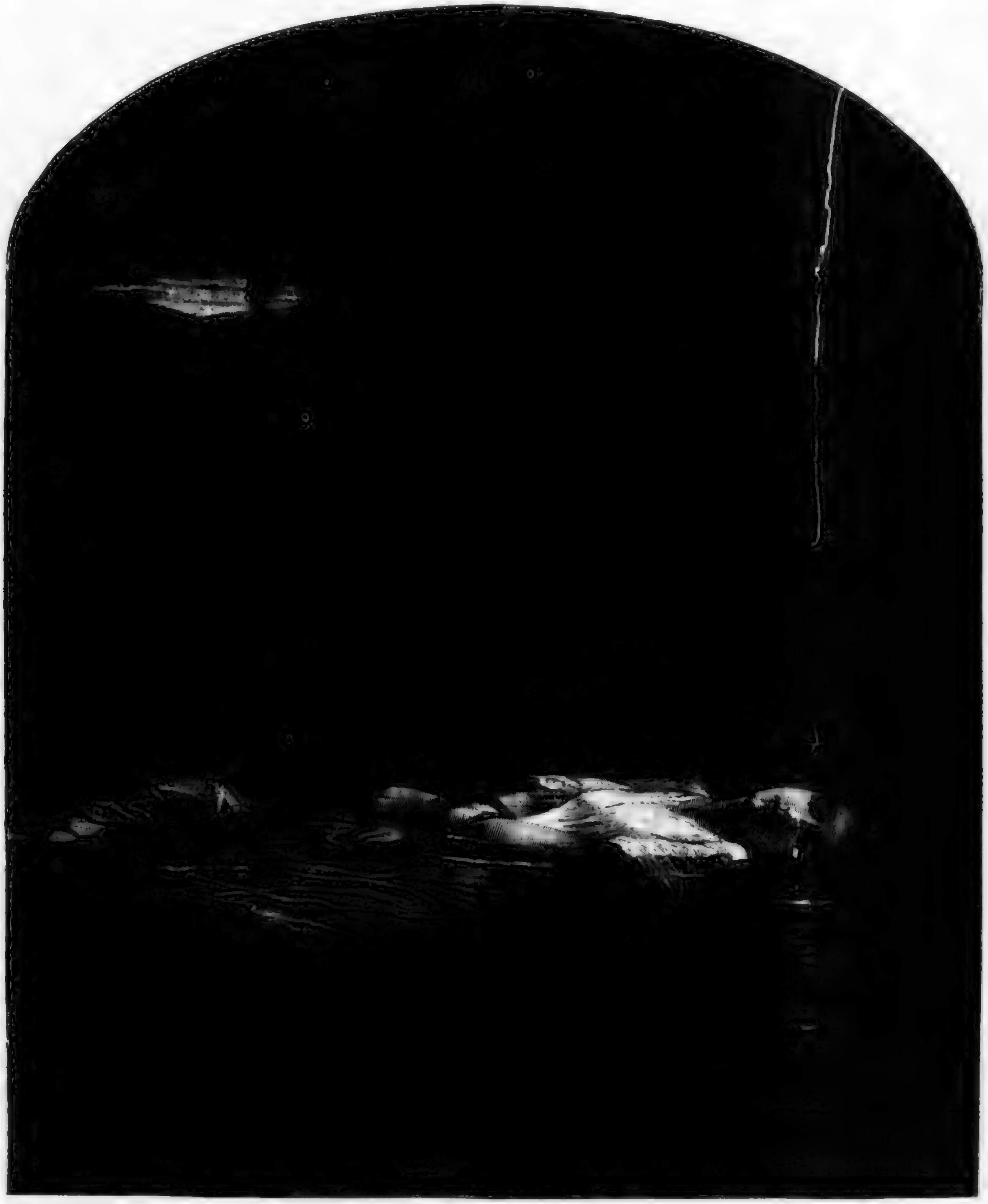
"'Their engagement?'

"'Yes, sir, their engagement. It is no recent thing, Jack. They drove over to Beechmere Pool one night. It was June then, Jack. It is October now. But since that night she has been his promised wife. Did you not wonder, you blind fellow, why Olivette took such a sentimental interest in Beechmere Pool? You know how many picnics and drives and expeditions have gone there, and always at her request?'

"'Well, what of it?' asked good-natured Jack.

"'What of it?' repeated Ruth, fiercely. 'Do you ask what of it? Is it just the thing to have been as silent as the grave about their engagement?'

"'Have they been that? You know it. I suppose Olivette has told you? I don't know why she chose you for her confidant rather than her father or myself; but I have no quarrel with her for having done so. It is only natural, I should think, though I've never been in love myself, for them to want their secret to be a secret. They mean no harm, I am sure of that.'



"THE VIRGIN MARTYR."

"'They mean no harm! She does not. Your sister is a noble woman,' said Ruth, purposely bringing her attack upon Jack's most vulnerable point. 'But I cannot say as much for him. Must I tell you everything before you will understand? I refused Tom Colleon last June myself. Why did he woo and win his cousin afterward?'

"'Because—perhaps—I—I think——'

"He paused. He could not tell this woman that his sister was so greatly her superior that Tom might have done what she said he did and still be blameless. Possibly his face showed his thought.

"At any rate, the wicked heart of the desperate woman boldly invented a plan to convince him.

"'Have you ever heard of his exploits in the college town where he was educated?' she asked.

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"'No. What are they?'

"'I cannot tell you. But I ask you to take my word that more than one person has had reason to regret having known Tom Colleon.'

"'I don't believe it,' said true-hearted Jack, earnestly, his appreciation of Tom speaking in every tone.

"He did not guess the depravity of Ruth Carlisle. He was only sure of Tom.

"'You needn't,' said Ruth, sententiously; 'but you must never say I guessed the end of this summer-time and did not warn you.'

"'Warn me?'

"'Yes. Tom Colleon may not prove false to Olivette. I believe he will. Do you know what will happen if I am right?'

"'No.'

"Ruth leaned forward until her face almost touched his own.

"'She will kill herself! I am sure of it. What will you do, Jack Colleon, if your sister should be found dead in Beechmere Pool some day?'

"'If that happens,' said brave and chivalrous Jack, as his brow darkened and grew hot—'if that happens, I will kill Tom Colleon with my own hand.'

"Tom waited to hear no more, but crept away to the house.

"He knew Ruth Carlisle now for what she really was; but he was so true in his heart and soul to Olivette that he could afford to smile at Jack's vindictive earnestness. At New Year's he hoped to have Olivette for his wife.

"In a few days, now, he would go through the form of asking her father for her. It would be only a form, for he knew his uncle loved him almost as well as he did his own children.

"When Olivette became his wife he would break up the intimacy between her and Ruth Carlisle; but he reasoned that it was not best to trouble her about it now.

"For himself, he resolved never to go to the home of the Carlisles again, unless necessity called him there.

"October drifted by. Early November reigned over earth and air. Olivette was spending a week at the Carlisle mansion, and Tom saw little of her.

"'Never mind,' he said to himself, 'she will be all my own some time.'

"In the middle of the forenoon a letter came to Tom. He opened it hurriedly, for the address was in the handwriting of the woman he loved. It was the most wonderful letter he had ever read:

"'My Darling, Darling Tom: I have found it! In one of the strangest places in this strange house; you would never guess where. It is the will! You are really your uncle's heir. I am so glad—so very glad—for your sake. No one else knows this—no one even guesses it. I have read the will, and I know enough of business to be sure it is all right. But I have put it back where it was hidden. Your dear hand shall be the one to take it out from where your uncle placed it. Come over this afternoon. Mr. Carlisle is away with the horses and carriage, and the only saddle horse is lame—a sudden attack of some kind—so that you won't be forced to go on any expeditions. We can have a pleasant time alone together. Of course I have not told Ruth. I am not sure I could trust her. I am sorry she must lose the home which has been hers so long, although I have always felt that it is justly yours, and, besides, I have never quite liked her.

"'Your loving little Olivette.'

"It was a wonderful letter. It was a very plain and outspoken letter. Worst of all, there was no question that a letter which came from the Carlisle mansion, when Mr. Carlisle was absent, must have passed through Ruth's hands, and this letter had certainly been tampered with.

"Tom settled several points in his own mind. First, that the letter was genuine; he was sure it was no forgery. Second, that some one had opened and read it; probably Ruth. Third, that it was extremely lucky that the will was not in Olivette's possession, and that no one but herself knew where it was to be found.

"The one thing which he could not settle to his satisfaction was just what Ruth Carlisle meant to do about it. The fact that she had allowed the letter to reach him at all was proof to him now, since he had heard her warn Jack against him, that she had some desperate scheme ready for use against them all.

"It was only a little after noon when Tom was set down at the gates of the Carlisle grounds—no, *his* grounds, now!—and had sent the carriage in which he had come from his uncle's house back home again.

"He took a shorter path than the usual one toward the house. Why did he? He believed that Olivette would expect him to do so, and would come to meet him. He did not dream that Ruth might come also.

"Half way to the house the path made a sudden turn. Tall hedges stood on either side. As Tom turned the corner, there stood Ruth.

"'Oh, Tom! Tom!' she cried, in well-feigned amazement, and with a ring of passion in her tones that grated on his ear.

"Then she tottered for a moment, and was sinking down in what seemed to Tom a deathly faint, when he did what any man would have done under the circumstances.

"He sprang forward and caught her. Her eyes were closed, and Tom believed she was entirely unconscious, despite the color in her cheek, as she sank a mere dead weight in his arms, and threw her own arms around his neck.

"It was an embarrassing position for a man to find himself in, and would have been more so if he had known that Olivette was just in sight at that moment.

"There was a very genuine sob from an agonized mouth up the slope a hundred feet away. There was a sudden rain of tears from sorrowful eyes. Then Olivette turned back. Her lover had come in the hour of his triumph, not to her, but to her rival. Rich now, he could be careless of what others said or felt. 'False! false! false to the core!'

"Those were the words she muttered to herself as she hurried toward the house. Olivette felt all the despair and angry determination which Ruth had so deftly prepared for her. Ruth was resting, half standing, half reclining, in the arms of the man who had been her lover. What had life left for her now? Nothing! Nothing!

"Tom wondered whether women are apt to clasp their plump and dainty arms about the necks of men when they faint, and whether it is usual for their faces to rest on the shoulders of those who support them, and whether their long hair often floats in a mass of tangled beauty over beard and breast. *We* know that when women really faint these things *never* happen.

"Ruth's fraud and pretense needed not to last long.

"For ten seconds, perhaps, after she saw Olivette hurry away, she lay with her head on Tom's breast.

"Then she opened her eyes with a long, shuddering breath which would have done her infinite credit had she been an actress.

"It was certainly very real. To Tom, who never guessed that the whole scene had been cleverly planned by Ruth for Olivette's benefit, it was so real that it almost disarmed suspicion.

"He offered his arm to Ruth, as they turned toward the house, with a feeling of genuine pity.

"He did not know that Olivette had been waiting near the house for him for two long hours, nor that Ruth had kept a long and weary vigil, with the grim patience of a fiend, hidden where she might meet him first, and meet him where Olivette would see what took place.

"It was a long walk to the house. Ruth forced Tom to move slowly.

"Arrived there, he was informed that Olivette was somewhere in the grounds. Search there took nearly an hour. She was nowhere to be found.

"Tom came back to the house. Ruth met him with a placid face. She had seen nothing of Olivette. Her tones were quiet. Her smile was friendly. Her eyes were kind. The pity for her rose up in Tom's heart again. He turned to leave her. He would search the grounds again.

"Something in her eye caught his attention. Like the fitful gleam of a hidden fire it shone out for an instant, and then was seen no more.

"But the instant was enough. His resolve was taken.

"'I will go up to Olivette's room,' he remarked.

"'You will not,' was the firm reply. 'I do not allow my gentleman friends to intrude in the private rooms of my lady guests. You will not go to Miss Colleon's room.'

"'I will,' he said.

"He stood opposite Ruth for more than a minute, their eyes fixed upon one another. Hers drooped first.

"He was stronger. He pushed her aside. He ran up the stairs. She came close behind him.

"He laid his hand upon the knob. The door was locked.

"'I could have told you that,' she said.

"'You have tried the door, then?' he inquired.

"She bowed her head in silence. A strange look passed over her face. She felt that the man before her was learning her character very rapidly.

"She let her mask fall. The demon heart shone out of her eyes.

"Tom trembled. He half believed that his murdered love lay just beyond the door.

"'I am going in here,' said he, firmly.

"'Certainly,' said she, 'when we can get a man to properly open the door.'

"'I shall break the door down.'

"'Not in my father's house.'

"'In *this house*, at any rate,' he retorted, quickly.

"One glance told him the truth. She understood his meaning. She had opened Olivette's letter and read it.

"He made a dash at the door, burst the fastenings and entered the room. No signs of disorder anywhere.

"The room seemed as peaceful as any room could be.

"Ruth had followed him. Both looked eagerly about the room.

"A little note lay upon the dressing-case. Both saw it at once. Tom reached it first. It was addressed, in Olivette's handwriting, to Ruth Carlisle.

"'Mine,' said that young lady, extending her hand.

"'Yes, yours,' said Tom; 'but I will read it first.'

"He tore it open.

"'Coward!' she said.

"But he read it, in spite of her word, or look, or act:

> "'Since your meeting with Tom Colleon to-day, he is nothing more to me. Keep the false man. May Heaven judge us all. You will find me among the lilies in Beechmere Pool.'

"In Beechmere Pool! Tom thought of what Jack had said. He thought of the missing will. He thought of how his innocent meeting with Ruth must have appeared to an onlooker. He thought of the engagement which had been kept a secret so long.

"Were not his life and his fortune and his sacred honor all at stake?"

"I should say so," said the reporter.

"He thought quickly. There was no horse he could ride. There was no neighbor near enough to make it an economy of time to go there for help.

"It was four miles to Beechmere Pool, and she had not less than one hour the start. Possibly she had a half-hour more.

"He hurried down-stairs, the mocking laugh of Ruth Carlisle ringing behind him. At the outer door he paused.

"The air was cold and damp, with a hint of coming snow in it. The lazy breeze was pushing a heavy mass of clouds up toward the sun.

"The last leaves of the dying year were floating drearily down. It was a sad day in itself, and across it lay the shadow of possible ruin.

"Believe me, the life of sweet, pure, gentle, loving Olivette was dearer to Tom Colleon than all else in the world.

"But Ruth Carlisle had so arranged that it was not that alone which was at stake—it was *everything*.

"Do you know what it is to run four miles over a rough country road? Do you guess how long it seems, when fear is tugging at your heart-strings?

"Can you imagine how a man feels as he dashes up a long, steep hill, while his veins seem bursting and his brain feels on fire? Can you think how it must seem to him as his heart and lungs struggle under the work he forces upon them?

"Tom Colleon did all that. Two months before you saw him make the best time ever made in a foot-race on the track in this town. Will you believe me when I tell you that he ran much faster that day? I honestly believe he did.

"Down by the woods, up the long, rough, rugged hill road, across the meadows. How he ran! How he ran!

"A man without training would have fallen dead. There were times when Tom believed he would never reach Beechmere Pool. He risked his life. He would have risked his very soul if he could have gained time by it.

"Up the last long slope. There, just ahead, and a quarter of a mile away, lay the pool, deep, dark, calm.

"Just at its edge stood Olivette, her feet upon the cold, sharp stones, her hands raised toward heaven in silent supplication.

"One moment she remained thus. Then she sprang far out from the bank, and the waters closed over her.

"How long will it take a woman to drown? How long will it take a very tired man to run a quarter of a mile?

"Tom wondered which would take the longer as he dashed down the hill.

"He saw her come to the surface. It was a terribly long road to the pond yet. She went down again. How quickly she was gone! Then she rose once more; then she disappeared. He was working now as runner never worked before.

"A half-dozen rods more, and he had leaped for the place where she went down—down—down!

"Well, he won. He found her in the deep—dragged her out.

"When he brought her out he feared she was dead; but vigorous work saved her. He had convinced her of his truth and honor by the time the sun was setting and gilding the surface of Beechmere Pool.

* * * * * *

"His life has been happy, and he has made hers equally so. Have I proved my case?"

"Yes," said the reporter. "But what became of Ruth?"

"God only knows. Tom went that night and obtained the will. He hired men to watch the premises to see that no mischief was done. He feared that she would burn the house. The men were not told to keep her from going away. She left the house that night. She never came back. It has been said that she was in Paris, a painted actress in one of the lowest theatres. But——"

"Well?" asked the reporter, at the end of a long pause.

"But I think that Beechmere Pool holds the secret of her going away. I would not pass it at midnight for a mint of money."

The tall, stout gentleman rose. The reporter followed his example.

"May I publish this story in my paper?" asked the reporter.

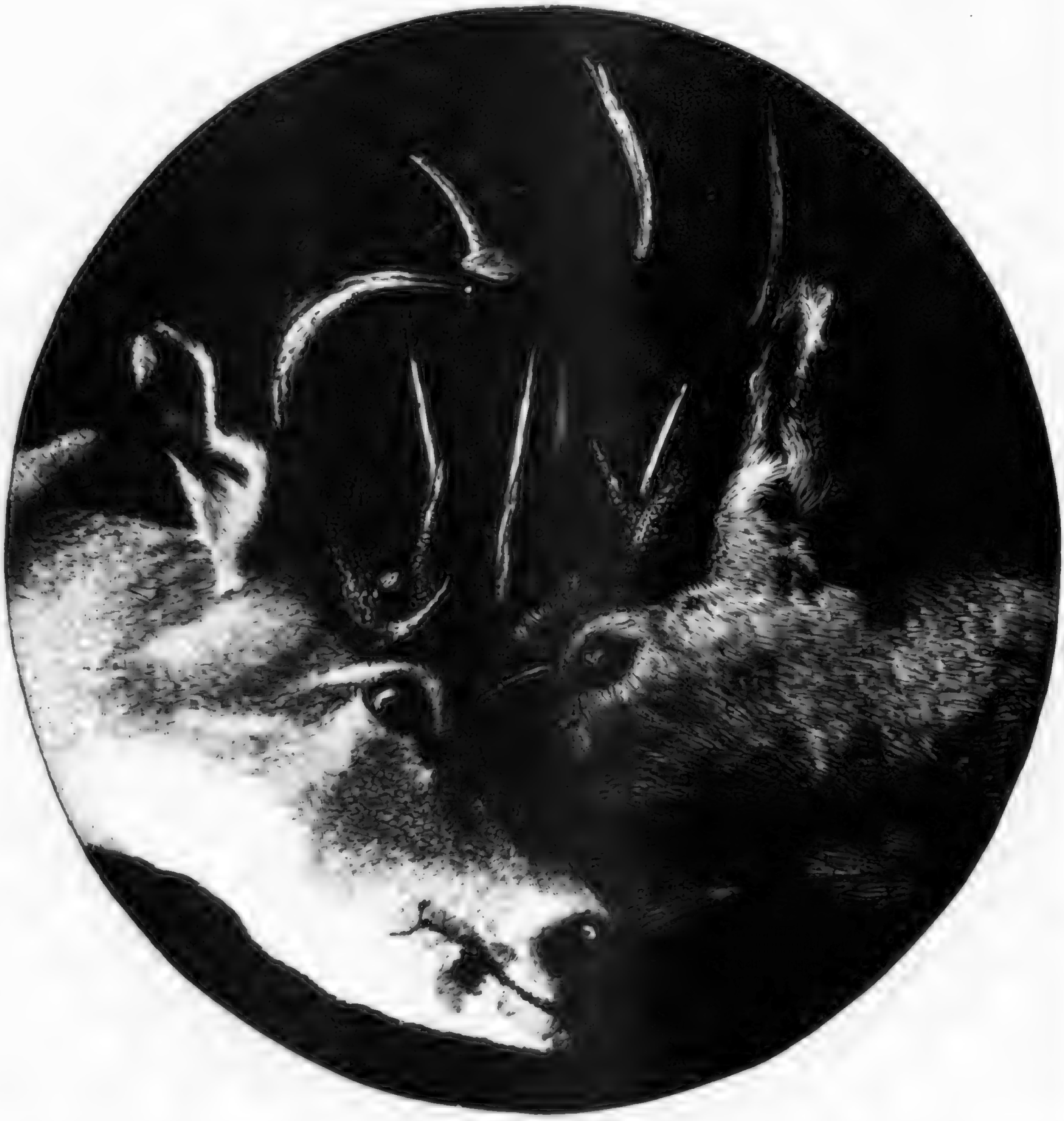
"Why not? Truth is stranger than fiction."

"And whom shall I credit with the story, and thank for a pleasant evening?"

"A happy man; a strong man; and a quick man yet, despite his years."

He handed the reporter his card.

It bore the name of Thomas Colleon.



LOCKED IN DEATH.

SUPINENESS and effeminacy have ruined more constitutions than were ever destroyed by excessive labor. Moderate exercise and toil, so far from prejudicing, strengthen and consolidate the body.

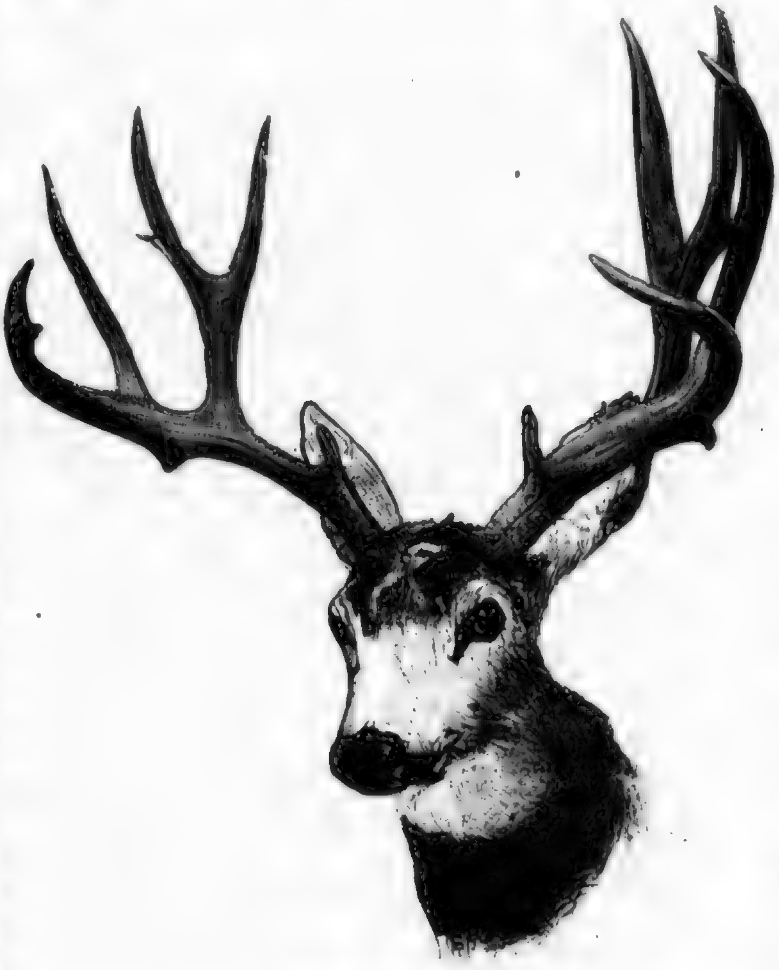
TWO ROCKY MOUNTAIN NOBLES.

THE BLACK-TAIL DEER AND THE MOUNTAIN SHEEP.

By W. H. B.

The deer of our Eastern forests (*Cariacus Virginianus*) is found in the Far West at many localities, but the deer *par excellence* of the mountains is the Black-tail deer (*Cariacus macrobis*).

Physically, they show decided differences, and the habits of the two animals vary quite as much. As the name indicates, the Western animal has a black tail; short, rather scantily haired, while the Virginian deer has a long, somewhat bushy tail, white on the under side. The antlers differ also; those of the Black-tail are heavier, spread wider apart (like elk-horns) near the points of the prongs, whereas those of the White-tail contract and curve inward near the extremities.



THE BLACK-TAIL DEER.

In character and habit, the Black-tail may be described as the bold, courageous deer, the White-tail as timid. The former occupies all altitudes, up to the timber-line, and, in Summer-time, frequently even beyond this. While the weather is hot, it is generally quite useless to hunt Black-tail in shady nooks when in the mountains; they are then high up, near the apex of some bald peak, where the breeze affords relief from gnats, musquitoes and similar pests.

Toward Autumn they seek less exposed points, and the bucks are partial to standing timber through which the fire has run. When they begin to shed the velvet from their horns, they utilize the hard tree-trunks as rubbing-posts for their antlers. In Winter the game is driven down still lower, for shelter partly, partly for food. In the mountains they are then best hunted on snow-shoes, and great slaughter is often occasioned if a band of deer can be surprised while the snow is deep and soft, or with but a thin crust on top, through which the fleeing animals break at every step. It is a pitiful sight to see a dozen or more of the handsome, plucky creatures struggling against certain death, cutting their legs in the icy crust in their frantic efforts to escape, staining the snow crimson with their lifeblood, and, finally, dying under the bullets of some man who butchers them as he would beef.

For resting, the Black-tail usually selects a place that affords him opportunity for a good lookout. When bucks and does run together in herds, the latter submit entirely to the judgment of their lords. A young buck or two are stationed as guards while the herd feeds, sleeps or rests. In case of an alarm, which is given by a shrill snort and stamping of the feet on the part of the guard, some buck promptly takes the lead, throws back his head and crashes through the timber at breakneck speed, with all the members of the band following in his wake. When running thus in herds, the game is rather easily surprised by a careful hunter, but after it is once stampeded, it rarely stops before a great deal of ground has been covered. Individual deer, or small bands of three and four, often show much curiosity, and sometimes a tendency to linger even while under fire. If started suddenly and running hard, a slight whistling by the hunter will frequently bring them to a stand, and offer him a chance for a shot. If the deer can be turned up a steep hill, it is all the better for the sportsman, for the animal is short-winded in high altitudes, much more so than antelope, elk and other game. When wounded, the poor thing soon becomes "sick" and must lie down to rest or get water; so that a deer, once hit, rarely gets away from its pursuer. A mountain sheep will run for miles, or until it drops dead, with a bullet clean through its body; an antelope will hobble off on three legs with amazing speed, and an elk seems to be stimulated for exertion by a bullet or two; but a deer wants rest and quiet and water as soon as it can get it.

If cornered, and especially if wounded, a buck will fight, particularly if hunted with dogs, but he will not hesitate to attack a man. We witnessed a ludicrous incident one day. Two hunters were riding ahead of us, through rather dense and high brush, nearly abreast but about forty yards apart. One of them started up two large bucks. There was no chance for a shot, as the brush almost immediately hid the game, so he shouted to his comrade. We had started up four grizzlies that morning, so our friend was somewhat doubtful as to the meaning of the shouts and the commotion in the brush, and stopped in a very small clearing he had reached. The bucks took a course which brought them directly upon him, and he suddenly found his flank menaced by the two animals, who were nearly frantic with terror. As they broke from the brush, almost jumping upon him and his horse, they hesitated for the fraction of a second, then lowered their heads, and both abreast, with blazing eyes, they made a gallant dash. The situation was too much for horseflesh, as well as for the man, and, with a yell that would have done credit to a Comanche, he drove spurs into his horse and leaped forward. The action was prompt, perhaps the promptest of his life, but barely cleared the viciously sharp horns of his assailants. It is not often that game will be found to run horse and hunter into the ground.

The most agreeable form of hunting deer in the Rocky Mountains is stalking them. It is best to start on a horse or mule and take only such portions on foot as furnish reasonable promise of game. Sometimes both game and hunter may be surprised, and a shot from the saddle must answer but this is the exception.

As we were riding along one day, my companion espied the antlers of a buck projecting above the brush about one hundred and fifty yards distant. He was facing us, and could, probably, observe our movements from his point of observation. A shot from the saddle was the only chance. With the shot the antlers dropped out of sight. The hunter threw down his reins and ran for the game as rapidly as possible. Unless the game is seen to lie dead on the ground no time should ever be lost in securing it. I waited patiently for about ten minutes for the signal that all was right, then tied our saddle animals and started after my friend.

I found him in a very peculiar and unenviable position. He was holding on with both hands to a hind foot of the buck, which was down on the ground, but kicking, turning, twisting and struggling with tremendous strength. The hunter was almost purple in the face, and was receiving a steady volley of the most vicious kicks, not all of which he could dodge. A suitable application of the knife shortly ended this performance. The bullet had struck the base of the horn and had stunned the buck. Just as the hunter reached him he was scrambling up, preparatory to making off. Catching hold where best he might, the latter hung on to the hind hoof of his victim with grim determination, and succeeded in flooring and holding his game until my arrival. It was fortunate that he wore thick buckskin gloves, for the sharp hoof of the deer would have cut his hands to pieces, as it did a considerable portion of his clothing.

Large herds of deer are getting very scarce now, except in the Winter, when driven to some sheltered point or locality by stress of weather or in search of food. North Park and Middle Park, in Colorado, used to contain great numbers, but they have been sadly reduced. In the Wind River Mountains and further north, deer are still rather plentiful, but they are shy until very late in the Autumn. For quiet, steady-going enjoyment few things can exceed the pleasure which stalking affords. I can see less sport in going to some given spot or over oft-trodden ground in a preserve, even with the certainty of getting a deer each time, than I do in entering an entirely new, wild country, studying its lay and the run of its game, and pitting your sagacity, knowledge and skill against the instinct and speed of your quarry.

One day we had found the deer tracks and trails all converging toward the summit of a rather high hill in the main mountain chain of Colorado, and decided to investigate the matter. There was no question as to the proximity of the game, so we moved along cautiously in the timber. When nearly half way up the mountain we saw an almost level, grassy clearing before us, one of the numerous little "parks" which afford such delightful retreats for game. It was a bright, sunny day, and the picture that was shown us, when we first obtained a glimpse of the park, was one never to be forgotten. Hidden in the timber and underbrush, we looked forth upon a green meadow, bathed in sunlight, with a sparkling brook from the mountain-side cutting across it. Every here and there small, graceful clumps of evergreens studded the grassy slopes and lent variety of form and color to the scene. Off to one side, a gigantic pine grew on some gently rising ground, sending its mighty boughs far into the air. Under the spreading shelter of this survivor of ages gone by was a band of about thirty black-tail deer. Two stalwart bucks were keeping watch over those intrusted to their care, while several more were lazily reclining on the soft turf. Fawns, with their dainty white spots still visible, were playing about the grass; does, young bucks and one grand old one, with great, wide-spreading antlers, were either feeding or resting, all unconscious of impending danger. Fringing this small paradise was the dark, dense timber of the forest, with the glimmering peaks of a mighty mountain chain in the distance; a fitting frame, truly, for such a noble picture of beauty and innocence.

Our object, unfortunately, was meat. So we shifted our position with great care until we had a good shot, and then laid low one of the young bucks. Quick as thought the oldest buck, after a hasty survey of the ground, had placed himself at the head of the band, and all dashed off into the near timber, the sound of crackling twigs and breaking boughs marking their course.

The terrific fights of bucks in the Autumn are too well known to require mention, and not rarely are skeletons found which show firmly interlocked horns that forced their unhappy owners to die of starvation.

The Indian has a great affection for the deer, inasmuch as it represents dollars and cents to him when in the form of buckskin. He will hunt and kill the game at any season of the year, and, as he is a patient, painstaking hunter, to whom time is of no value, he is really the most deadly enemy of this game. Carrying the hide to his camp, his squaws scrape and tan it for him. Smoked or unsmoked, he then converts it into cash or supplies at the nearest trading-post, or he will ride many miles to escape the confines of his reservation and "swap" the buckskin to some frontier peddler for that desire of his red soul—fire-water. I have seen Indians burn down square miles of timber at a time in order to drive out and kill one or two deer. They persistently and relentlessly find and kill the deer where no white man would get a shot at them; and they kill, indiscriminately, bucks, does and fawns whatever has a skin on it.

If the Indians could be estopped from this reckless slaughter, and if the killing of large numbers (often useless) during severe Winters could be checked, we might hope to retain our black-tail deer in reasonably large numbers for many years to come. The boundless forests of our mountain regions offer them ample shelter under all ordinary circumstances, and, if not killed for the sake of a few paltry dollars, or butchered without reason or judgment, they are hardy enough to take care of themselves.

It is appalling to think what a great portion of our Western territory would be without game. Think of regions where neither the pick nor the plow can find encouragement or sustain its owner! Think of these vast areas doomed to be absolutely dead wastes (bar

their timber), their game, their life taken from them, and nothing given to supply its place.

The European Alps have their *chamois* and their *steinbock*. Our great Western mountains have their mountain goat and their mountain sheep.

High above the realms of ordinary game the mountain sheep finds its home, in the region of perpetual snows, beyond the growth of timber. A dwarfish willow forms the only vegetation besides grass and the countless flowers of our high altitudes. If game may be prized according to the difficulties its chase and capture present, then, truly, the graceful ruler of our loftiest mountain regions can rank high indeed.

During the Winter months, when deep snow covers every vestige of nourishment, the sheep come down into the timbered belt, but only low enough to gain sustenance, and with the first signs of approaching Spring they return to the highest available points.

The Rocky Mountain Sheep, or Bighorn, is of the size of a large deer, of about the same color, and has a pair of tremendous curved horns, resembling those of a ram. Short, slightly curved horns, somewhat like those of a young goat, adorn the head of the female. Both are yellow-brown, the same color as ram's horns. Its hair, in Summer, is very much like that of a deer, only denser and somewhat coarser ; in the Winter it has a coat of exceedingly fine wool, light gray in color, in addition to the hairy coat. In days gone by the question was often asked, whether the Bighorn was covered with wool. As its haunts are wellnigh inaccessible until midsummer, the answer was not given for a long time. Some years ago we struck a herd of about one hundred sheep, which presented a very peculiar appearance. The sheep were of a dead, very light gray color, and looked unusually rough. We shot one of the animals, and found that it was just shedding a coat of remarkably silky wool. With the keen, cutting winds and low temperatures of the mountains the creatures certainly require the warmest kind of covering.

When the mild weather brings out the young grass, and the brilliantly colored flowers, and the delicate bluebells of our high mountains, then the sheep begin to separate into small bands, and feed along given ranges. As they rarely descend into the lowlands, and then only when driven by necessity or an enemy, they occupy the same ground very persistently. Small bands, from three to twenty head, may be found peaceably browsing or playfully gamboling at elevations ranging from 11,500 to 14,000 feet. Unless they have been previously disturbed, or scent an unusual danger, they are not, ordinarily, shy ; but if they have once made acquaintance with that arch-intruder, man, they flee him often long before he has even seen them. Many a time, as we were ascending a mountain-slope, we could hear the sliding of shingle or the rush of loose bowlders far above us, and in most cases we would find that a band of Bighorns was seeking safety in rapid flight. Where white (or red) man has not trod before they were far less timid, particularly if the wind was against them, even though they saw the advancing enemy. If the wind was in their favor, however, nothing would stop them in their mad flight.

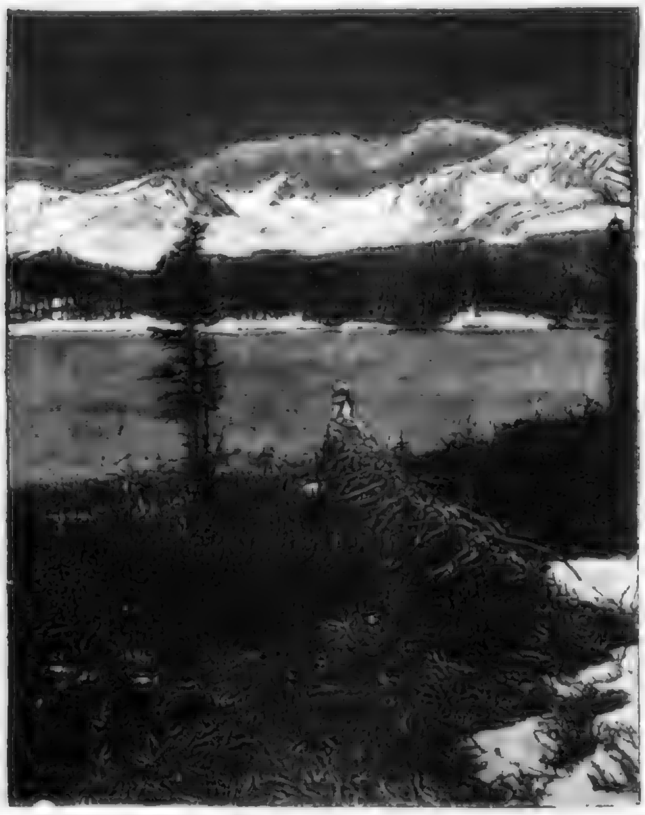
We often noticed that grazing bands put out sentinels, one if their number was small, more if it was larger. These guards were young bucks, and they were placed to *leeward*. On the windward side the browsing or sleeping animals could protect themselves and note threatening danger quickly enough ; on their lee they relied upon the keen scent and watchful eyes of their sentinels. It was a beautiful sight to watch six or eight of the graceful animals peacefully feeding with great enjoyment, or little lambs playing together like kittens, while a handsome, stately young buck, fully alive to the responsibility placed upon him, was slowly marching along to leeward, forward and back, head aloft, while sharply watching all approaches and never so much as touching the tempting grass at his feet.

If danger appeared, as revealed by scent or sight, a sharp, shrill whistle from the guard would instantly alarm and collect the entire band. In an incredibly short time a leader would turn up, and the whole troop would be scampering off with a rapidity that rendered shooting a very uncertain performance. In this particular characteristic—that the band will generally try to remain together and follow its self-appointed leader—the Bighorn somewhat resembles its domestic cousin, the sheep.

In the Autumn of the year the bucks have terrific fights among themselves. Often their heavy horns can be seen cracked, seamed and furrowed, sometimes as if mashed with a sledgehammer. Every now and then resounding blows can be heard high up in the mountains, carried far and wide by a repeating echo. It is the Bighorn bucks who are dealing and receiving frightful blows in their fierce fights for conquest. Popular superstition accounted for the cracked and scarred horns by the fable that the animals, when hard pressed, threw themselves headlong from the highest peaks and crags, alighted on their horns by some special understanding with a beneficent Providence, picked themselves up and walked off with a smiling countenance. The sheep will make terrific leaps, get over difficult, rocky ground in the most astounding manner, with a sureness of foot that is equaled only by the chamois. They never alight on the horns by choice or design. One day we found the complete skeletons of two huge bucks, horns interlocked, facing each other even in death, lying in the shadow of a great, rocky wall, over which the heat of their deadly combat had hurled them. Was it imagination, or did the eyeless sockets still glare defiance at each other?

Hunting Bighorns is not so easy a matter as it might be. The ascent of mountain-slopes, over loose bowlders and sliding, slipping shingle, is always accompanied by more or less noise, and the cautious animals quickly become alarmed. I spent an entire forenoon, one day, trying to get a couple of very fine bucks within good shooting distance. Emerging from a lot of "scrub-wood" at timber-line, I saw a rocky face with alkaline efflorescence some distance ahead. Reconnoitring the ground before advancing any further, I discovered two bucks about a mile distant, heading for the alkali, which I rightly judged to be a salt lick. No trees grew higher up, and the scant willow-brush was not sufficient to conceal me unless I crawled snake fashion. This I did, though I failed to enjoy it, for it was rather early in the morning. Small puddles of water had their crusts of ice over them, and the peculiarly startling contact with half-frozen mud was not much to my taste.

To my surprise, I found that the two bucks, when within about four hundred yards of the lick, began making a detour, walking sedately all around it, of course, on the far side from my post of observation, and finally retired some distance up the mountain-side, seemingly for consultation. By that time I had crawled within about three hundred yards of the lick, and could advance no further for the want of sheltering brush. There was but very little breeze, and yet the animals must have found the vicinity of the lick unsafe.



THE HOME OF THE MOUNTAIN SHEEP.

They passed and repassed it a number of times, stood and gazed longingly at it for minutes at a time, but always remained at a quite safe distance. This behavior they kept up for the better part of two hours. Meanwhile, the half frozen mud upon which I was reclining gradually thawed under me, and my position became one of pronounced discomfort.

I concluded to risk a shot. Estimating the distance at four hundred yards, I fell short, striking directly under one of the animals (shooting up-hill in the Far West is decidedly deceptive). Both were standing almost side by side; they leaped high into the air as the bullet scattered the ground near their feet, and then gazed about them nervously to see what had happened. Evidently they had never heard a rifle-shot before. While they exhibited no especial fear in their movements, the equanimity of their minds was disturbed; they were a little uneasy, and gradually they moved away from the lick, very slowly, apparently under protest, and yet as if thinking that prudence might be the better part of valor. As soon as they had disappeared in a neighboring ravine, I renounced my moist, uncomfortable couch and followed them. I took to the timber, so as to be out of sight, and, finally, emerged from the latter into the willow-brush again. As I carefully crawled along, I turned a corner and saw my game quietly feeding not more than two hundred yards off. The two bucks were magnificent specimens of their kind, sleek and fat, with large, beautifully curved horns. I decided to take matters easy and make very sure of my game. So I arranged my anatomy conveniently, and began, slowly, to get my rifle into position. I had everything in good form, a careful bead drawn on the larger animal of the two, was quietly chuckling to myself at the prospective happy termination of my morning's work, mud-bath included, and was merely waiting for my chosen victim to show his flank a little more, so as to make the shot sure beyond doubt, when, suddenly, a couple of ptarmigan (mountain quail) rose with a loud *whirrrr* not a dozen feet from the muzzle of my rifle. Like a flash of lightning the two bucks turned toward the noise—probably saw something of me or the rifle—and then disappeared with marvelous speed. They turned a corner so quickly that I never even got a chance to put in a flying shot. Possibly it was some consolation that I bagged the ptarmigan, but, at the time, I concluded that the English language lacked words and force to do the case justice.

It is best to take plenty of time, whenever possible, and make sure of your aim, when shooting at mountain sheep, for the wounded animal will run at the top of its speed for miles, or until it drops dead. I had been climbing up a snow-clad peak one Summer's afternoon and was getting tired, when I reached a flat rock which projected several feet above its surroundings, and from which the snow had blown off. I stretched myself at full length on my back and came near dozing off. Confusedly I heard some sounds that resembled the advance of a troop of cavalry. Lazily I opened my eyes and partly turned my head, only to find a band of about eight mountain sheep trotting toward me over the hard snow. I decided to shoot Creedmoor style (from the back) if the game should come in line, although my rifle carried only a twenty-eight-inch barrel. The game ran into line. I hit my animal a little too far back, and could only tell from the blood-trail that one had been struck at all. Nothing in its gait or speed would have indicated that my shot had told. For nearly four miles did I follow this bloody trail before I came upon the dead Bighorn. In its sorely wounded condition the creature had, up to within a hundred yards of where I found it, kept up with the others, had jumped from rock to rock off crags and steep walls as high as eighteen feet, and had passed over places at breakneck speed where I found it eminently useful to employ both hands and feet.

There is, to my taste, no game which equals mountain sheep, especially if one has shot it himself. If very fat, then the meat has a faint, very delicate flavor of mutton; otherwise it more nearly resembles venison, although it is more juicy and tender.

It is a matter of congratulation that this beautiful animal abides in the most inaccessible places, and it is to be hoped that this fact may preserve it in numbers for years to come. The herds do not, in their natural course, increase rapidly, and they have to contend with attacks from eagles and other animals of prey, as well as against the climatal severities their life exposes them to.

Unless well acquainted with the existence of hunters, the animal shows a good deal of curiosity, and many a one falls a victim to this trait. In the Rocky Mountains the size of the bands has greatly diminished within the last twenty years, and the graceful animals, with their proud bearing, have disappeared altogether from many localities where, formerly, they were numerous. The encroachments of prospectors and miners, who dig and blast for wealth even far above timber-line, have driven this noblest mountain game from places where I still saw it in herds of twenty and more but a dozen years ago.

Far in the North, in the Range of the Great Tetons, near Fremont's Peak, and in those mountainous regions where nuggets of gold and veins which bear silver do not reward the adventurous pioneer, there the mountain sheep still roams in goodly herds.

To UNDERSTAND the world is wiser than to condemn it. To study the world is better than to shun it. To use the world is nobler than to abuse it. To make the world better, lovelier and happier is the noblest work of man or woman.

XUM

ARTIFICIAL MEMORY AND THE HISTORY OF MNEMONICS.

By Walter Edgar McCann.

The science of mnemonics is founded on the linking together of thoughts that are naturally related. Dr. Andrew Wilson is of opinion that the brain-cells which are connected with the work of thinking form a connected series in the gray matter of the brain. The Egyptian system of hieroglyphics was intended simply as a support to the memory. The Romans, as Cicero and others have testified, considered mnemonics among the greatest of the sciences, and it was cultivated to an extraordinary extent. Indeed, it is a little difficult to credit some of the accounts of the perfection to which it was brought. The plan or scheme, as Quintilian relates, consisted of nothing more than choosing a spacious place, such, for example, as a large house, divided into many apartments. When a discourse was to be spoken, each division of it was assigned to some portion of the building—the ideas of the opening passage to the threshold, those of the next paragraph to the hall, the mind then ranging to the parlors, bedrooms and the like, observing always a certain order. Cicero says, speaking of this: "We ought to make use of a great number of places, all full in view, very remarkable and of a moderate distance from each other; and of images having life and motion, strong, well specified, and such as may easily present themselves to the mind and strike it in a moment." This seems crude enough, and yet long orations were retained in the mind in this way.

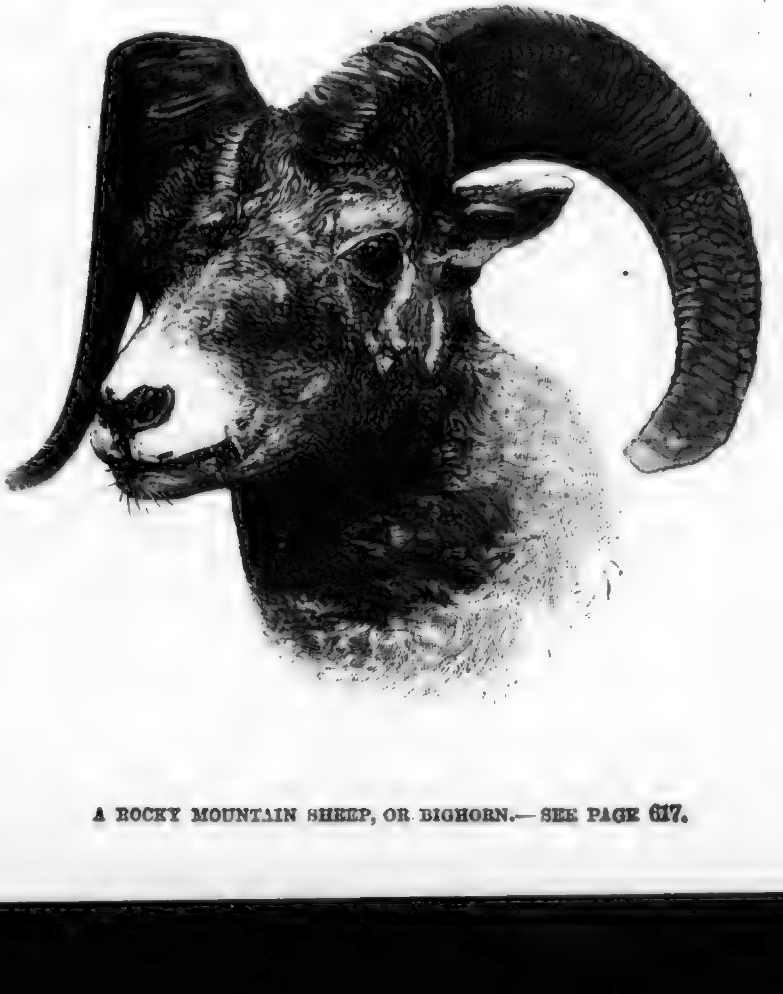
With the decline of public speaking and of literature generally, mechanical memory went out of fashion, and there is no trace of any work on the subject until near the fourteenth century, when Raymond Lully referred to it in a treatise which is said to be still in existence. There is one also at Oxford in manuscript, by Roger Bacon. Here the Roman method is still preserved, all the clews to the different branches of a subject, or to facts of any kind, being founded on mental places, signs and pictures. As before, the apartments of a house are chosen, and when this mansion is occupied another is taken, and so a whole imaginary village may be constructed. It is directed that the images should always be of an attractive or novel character. To register simple facts, such as the dates of an historical event, some such device as this was employed: The universal deluge is calculated to have taken place B.C. 2348, and to remember this an ark would be placed in the second house of the street, on the third floor and in the forty-eighth room. But with a multitude of such facts to deal with, it may be conceived that none but an extraordinary natural memory could retain them without confusion.

About 1492 there were two quite noted professors of the art, a German named Conrad Celtes, and Petrus de Ravenna, the latter a teacher of law at Padua. He introduced some changes in the old system, among other things representing the letters of the alphabet by beautiful maidens and producing various combinations. He wrote a work explaining his ideas, and also traveled through Italy delivering lectures and performing astonishing feats.

Next we hear of John Romberich de Krypse, who figured about 1533, and his plan was to divide the walls of a room and the ceiling and floor into squares, in each of which he placed his facts, dates, and other matters. Then came Gulielmus Gratavolus, who flourished in 1586, and wrote a volume entitled "The Castel of Memorie." This black-letter is still in existence, and also a French translation of it made at Lyons by Etienne Cape.

The greatest sensation, however, was created by a German scholar named Lembert Schenckel, who appeared at the end of the sixteenth century. He was a profound student, and wrote many works on prosody, grammar, rhetoric and like subjects. He traveled all through France, Italy and Germany lecturing upon his mnemonic doctrines, and giving the most surprising illustrations of the value of his system. Crowds came to listen to him, and the authorities were called upon to take him up and punish him as a magician. There was really nothing very remarkable, however, in what he taught, as his method was simply that of Simonides, with some improvements and amplifications. He published a tractate called "De Memoria." His pupil, Martin Sommer, a Silesian, about nine years later published another volume with still further enlargements and useful changes.

Other books continued to be written by different exponents of the art, but nothing striking was developed until about 1730, when Dr. Richard Grey, Rector of Hinton, in Northamptonshire, England, took up the subject. He had read a great deal about mnemonics, and was impressed by the fact that the local or topical systems of Simonides and others were particularly defective in the resources provided for remembering dates. He was one day reading a book by Bishop Beveridge, in which it was stated that the Hebrews, whose alphabet contained no vowels, were accustomed to abridge phrases or sentences containing many words, by forming, from the initial letters of the different words of the phrase, an artificial word, which enabled them to recall the entire sentence. In addition they also formed, with the



A ROCKY MOUNTAIN SHEEP, OR BIGHORN.—SEE PAGE 617.

letters which they used as numerical figures, words which they could more easily retain in their memories than the figures forming certain numbers, so that to find the number sought for it was only necessary to recall the artificial word committed to memory ; and so also to recollect a desired sentence it was only necessary to recall the word composed of the initial letters of each word of the sentence.

He immediately proceeded to make the following system of numerical signs and equivalents :

1.	2.	3.	4.	5.	6.	7.	8,	9,	0.
B,	D.	T.	P.	L.	S.	P.	K.	N.	Z.
A.	E.	I,	O,	U,	AU,	OI,	EI,	OU,	Y.

Thus, to remember the date of the foundation of Rome, 752, he formed the word Rome-pud. This is clumsy enough, but still there was a certain originality about it, and the idea was eventually developed by others to a remarkable extent.

The first to follow Dr. Grey was the celebrated monk, Feinagle, who appeared about 1806. He lectured in Paris and then in England, and created an extraordinary sensation, unparalleled since the time of Schenckel ; but, unlike that worthy scholar, he was not taken for a conjurer. He greatly improved Grey's ideas, and went back again to Simonides, borrowing the ancient device of localities. He combined the two with some ingenuity ; but the result was a complication which none but a very fine natural memory could make use of.

Then, about 1820, came another ecclesiastic, Aime Paris, who took up Feinagle's doctrines, and gave to the world the system which is used by all who make use of mnemonics at all at the present day. He lectured with great success, and various persons added different modifications and improvements. For instance, a Polish scholar named Jacwinsky combined with it a new picture method ; and a German named Kothe, as well as an Englishman named Pick, developed some further ideas connected with the laws of association.

About 1840 a Frenchman named François Fauvel-Gouraud came to the United States and began the delivery of lectures on artificial memory in all the large cities, claiming that himself and Aime Paris had made simultaneously the same discoveries. Certainly the two systems were precisely alike, and so much so that by many persons, and by some of the newspapers, M. Fauvel-Gouraud was denounced in terms far from complimentary to his literary honesty. Indeed, there was so much feeling against him in some places that serious disturbances occurred. On the whole, however, he was very successful and made a great deal of money. He published several books explaining his system, which was absolutely that of Paris.

It will now, perhaps, be of interest to give an outline of mnemonics as the art is at present taught, with the latest improvements. "Picturing" has been already explained. Dr. Mortimer Granville in his "Secret of a Good Memory," suggests that "everything be pictured in the mind, both in receiving and remembering subjects. What is heard must be written or, still better, sketched. Particular facts may be associated with special forms, constituting a system of mental hieroglyphics. Persons possessing this instinct should sketch or write everything, and may freely employ every or any system of memory which consists in *placing* the signs denoting ideas in particular squares or pictorial relations." Here, as Professor Proctor, the astronomer, believes, is the secret of the phenomenal "calculating boys" and chess-players. These persons have the special faculty of picturing groups of objects, figures, chessmen, and the like, at will. And yet even ordinary minds may cultivate this faculty. Professor Proctor speaks of a Chinaman he saw in 1875, who gave exhibitions of his skill as a computer. Among other tests, about thirty numbers of four digits each were named to him as fast as a quick writer could take them down. When all had been given he was told to add them, mentally, while a practiced arithmetician added them on paper. "It is unnecessary for me to add them," he said, "because I did that as you gave them to me. The total is—so-and-so." It presently appeared that this was correct. The calculator said hundreds in China were trained to equal readiness in arithmetical processes. Morphy, Blackburn, Zukertort and others play their twenty games of chess blindfolded upon the same principle, seeing the board as vividly through the mind's eye as they might with the real one.

A single illustration will show the value of the associative principle. Suppose we write down rapidly twenty words at random, such as boy, hat, flower, book, card, pencil, road, knife, keys, tree, apple, pence, wagon, church, sparrow, gun, woman, farmer, doctor, knife. After one reading it will be found difficult to repeat these words as they stand, or to recall more than half of them in any order. But if we proceed to establish a connection between them, the whole list may be retained in the mind without effort. Thus we might picture the boy, and upon his head the hat, in one hand the flower and in the other the book, in the book a card and between his lips the pencil. He is passing along a road and finds a knife and a bunch of keys under a tree. He climbs a tree and plucks an apple, and, then, standing on the fence, sees a wagon approaching, on its return from the distant church. A sparrow flies by and the report of a gun is heard. A woman is thrown from the wagon by the frightened horses ; a farmer appears, who runs for a doctor, who comes with his knife. By establishing some association between naturally disconnected words it is possible to remember hundreds of them after a single perusal.

Figures and dates, however, are the most difficult things to retain in the mind and to recall at will ; but by the simple and ingenious processes of Aime Paris, Fauvel-Gouraud and others who have applied themselves to the development of the crude ideas of Feinagle, it is possible to store the brain with a mass of the most complicated figures in history, biography, geography, astronomy, physics, chess, whist, and innumerable other studies and subjects.

The fundamental basis comprises the following articulations, comprising the consonants of the English language, and omitting the vowels and silent letters :

Se,	Te,	Ne,	Me,	Re,	Le,	Che,	Ke,	Fe,	Pe
Ze,	De,					Je,	Que,	Va,	Be
						She,	Ghe,		
0,	1,	2,	3,	4,	5,	6,	7,	8,	9.

The vowel E is placed after each consonant for the sake of uniformity of pronunciation, and the above formula is readily remembered by noting the following: That S, corresponding with O, sounds like the beginning of the word zero ; T, formed with one upright mark, resembles the stroke 1 ; N, formed with two marks (the small n), stands for 2 ; m, with three marks, for 3 ; R is the fourth letter of the word four ; L in Roman notation is 50, and without the cipher suggests 5 ; J is like a reversed 6 ; K is the first letter of Key, which inverted it resembles, and a key is somewhat like the figure 7 ; a small f in writing resembles the figure 8 ; P is like a reversed 9, for which it stands.

All short words, such as "and," "if" and "the," are omitted, and so is the syllable "ing," which, in such words as ring, lung, song and the like, is sounded like the hard ghe, and comes under the figure 7. All spelling is by sound or upon the principle of shorthand writing.

The translation of words is simplicity itself, thus:

Map—mp—39.
Bite—bt—91.
Leaf—lf—58.
Strap—strp—0149.
Match—mch—36.
Measure—msher—364.

As already stated, we know from experience that words and sentences are far easier to remember than figures. To fix in the mind the date of any historical or other occurrence, we therefore first choose a word representing that date.

For example, the death of Abraham is supposed to have occurred B. C. 1821. Those numbers will give us D-v-n-t, or the word Divinity. We therefore construct the following formula:

"After his death Abraham went to repose in the bosom of *Divinity.*"

The formula or sentence must always be framed to have a close connection with the event to be memorized, and the last word articulated gives the date.

The next principle is rhymes, or, as Paris calls them, Homophonic Analogies. This consists simply in changing the name of the fact to be mnemonized into a word having a similar sound, but so nearly similar as to recur immediately to the mind whenever the name of the fact shall be pronounced. Without this aid from the sound of words it would be impossible to remember the thousands of formulas a student who relies upon this system needs to construct.

Persons "cramming" for a Civil Service examination will find it of particular value, for instance, as respects the latitude and longitude of places.

Alexandria in Egypt is associated with the name of Alexander the Great, and we construct the following sentence:

"Alexander the Great, so bold, is nevertheless said to have been afraid of *Mute Mice.*"

Translating the last words, we find they give 31–30, or latitude 31°, longitude 30°.

"For Paris we may say, a pear is as sweet as *Ripe Honey.*"

This shows latitude 49°, longitude 2 .

The same principle may be applied to distances, length of rivers, height of mountains, specific gravities, populations, deaths and ages of great men, etc.

The terms of office of the Presidents of the United States are difficult to remember, but if we turn the name of each into a homophonic formula a single reading of the phrase is sufficient.

When did Taylor take his seat? In 1849. The formula may be arranged:

"A *tailor* can easily make a handsome *Robe.*"

The word robe gives 49, which is sufficient, the 18 being understood. The natural memory supplies the fact that Washington and Adams were the only two who were inaugurated in the previous century.

For Madison:

"A *madstone* applied to a bite will draw out the poisonous *Sap.*"

Se-pe gives 09, or 1809.

In biographical chronology it is usual to put two figures to the end of the date of the death, representing the duration of life. At the same time the figure 1, indicating the thousand, may be cut off from any date when desirable on account of the mnemotechnic word, as it is impossible to mistake a thousand years in this instance, and thus a single word be made with these two facts.

Example:

"Napoleon has often been styled by his admirers the *Divine Italian.*"

These words give 1821-52. If we substract 52 from 1821 we shall find that he was born in 1769. Thus in one simple sentence we have the years of his birth and death and his age.

These illustrations give an idea only of the basis of this system. The development, which is quite ingenious, and, in some respects, a little complicated, would require more space than is available. It may be applied, however, to the histories of the sovereigns and dynasties of different countries, to a vast mass of astronomical facts, to problems in chess, such as the noted one of conducting the knight all over the board from the first or any other square back again to the point whence he started, without his having visited twice the same spot, and to a great variety of mathematical uses. In short, wherever figures are to be employed this artificial aid to the memory may be considered invaluable.

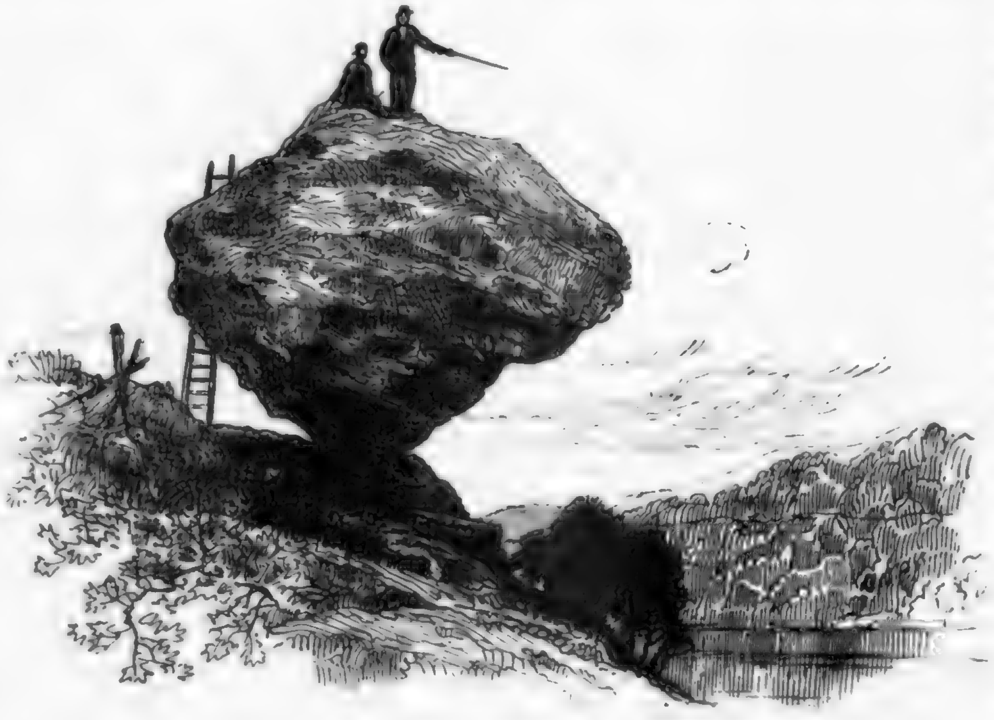
By something of the same means, with additions of his own, the Abbé Morgino contrived to learn, unassisted by a teacher or practical experience in conversation, thirteen foreign languages. Some of them he does not speak very well, but he reads all with facility. One of his rules was to memorize a certain number of words in the dictionary every day, which, sustained by his mnemonic devices, he did with great facility. His acquirements in nearly all the sciences were of extraordinary character. Like Littré, the author of the dictionary, he was, or, it should probably be said, is—for no notice that he is not still living has been published in this country—a walking encyclopædia.

The abbé is, indeed, in many other ways a man by himself. He said, a few years ago: "I was when younger one of the most extraordinary personalities of my time, and François Arago sometimes used to threaten to have me burned at the stake as a sorcerer." He has published nearly two hundred volumes, on all sorts of topics—history, mathematics, philology, astronomy and general literature—besides endless articles and reviews. To accomplish this prodigious amount of labor he is obliged to keep at his desk all day long, and he therefore writes and studies from eight o'clock in the morning until nine at night. He has never accustomed himself to taking a particle of exercise of any kind, not even an ordinary walk, and yet he has never had a headache or experienced the nervous prostration which almost inevitably follows close application. The secret is in the frugality of his habits, than which nothing could be more simple. Of his memory he is particularly proud, finding it now, at more than eighty-three, as clear and useful as it was in his youth; much of which he attributes to the manner in which he has exercised it—the exact and yet gentle discipline by which it has been governed. He gives an illustration of how this faculty may be injured by the injudicious use of tobacco. At one time, while in Munich, he fell into the custom of smoking three or four cigars every day, besides taking a great deal of snuff. Suddenly, one day, while writing at table, he could not recall certain dates with which, by his mnemonic process, he was familiar, or translate a passage he had met with in a book he was reviewing. In vain he thumped his forehead. He felt that the failure was due to the abuse of tobacco, and immediately he made the resolution not to

XUM

touch it in any form again, in which he has since persevered. In a short while his memory returned and became as efficient as before. Not the least of the surprising characteristics which mark this industrious old ecclesiastic is the capacity spoken of for incessant mental labor, in which there was probably never any one else like him except Littré. But the latter even exceeded the abbé in his ability to apply himself to labor with no exercise and but little sleep. For twenty years, it is said, Littré wrote daily from eight o'clock in the morning until three the next morning. His digestion remained unimpaired almost to the last, notwithstanding this strange mode of life; but it was probably owing to the circumstance that he subsisted chiefly upon fish and coarse bread.

It is undeniable that there are objections to mnemonics, and some of them are well founded. For one thing, mental picturing is with some minds by no means easy, and, in truth, requires a vivid imagination in almost all cases where practiced successfully. It has been urged that dreams are mental pictures of the most striking character, and yet the memory of them soon passes away, often with the vision itself. Then, too, the machinery of artificial systems is necessarily cumbersome, and the student, instead of being required to retain one thing, must remember two—the subject itself and the association. In the history of any country, for instance, there is the multitude of facts, and then the equally great multitude of links leading to them. But still, it is as with a man who has a heavy load to remove of a great variety of articles. Attached to his person, they would prove more than he could manage; but by placing them in a hand-cart or wheelbarrow, although he adds to the weight he must handle, yet the convenience and facility afforded by the vehicle more than compensate for the additional burden.



SAMPSON'S ROCK.

SAMPSON'S ROCK.

A FEW Summers ago, while on a vacation-tour through the valley of the Housatonic, particularly in that section between Sandy Hook and Brookfield, I was led by a curious circumstance to deviate from my intended course and make a day's visit to a quaint little town a few miles to the westward, known in olden times as Judea, but in modern geographies called Washington.

I was taking a morning drive along the shores of the Housatonic, through a most charming road, overhung with beeches and elms; and as I stopped to give my little horse a drink from a trickling moss-grown grotto in the bank, he suddenly turned and looked backward.

Without a moment's warning, and before I could even discern the cause of his fear, he was off in a mad gallop. It proved to be a short fit, however, and I soon succeeded in subduing him. And, having much curiosity to learn the cause of this strange freak, I ran him under a horse-shed by the roadside and hitched him securely.

It was with considerable interest that I walked back on the road on which I had sped so unceremoniously a few minutes previous. I did not have to walk far before my curiosity was satisfied, for a most strange sight met my eyes. The distance seemed filled with the hum of voices and motion of wheels, and as I looked toward the summit of a slight ascent in the road, I was greeted with the appearance of a noble span of donkeys attached to a cart, in which were half a dozen boys, each one testing the strength of a hickory stick on the back of the "critter" nearest him. The animals seemed to enjoy the sport as much as the boys, and were evidently of the opinion that the youngsters were doing their utmost toward keeping off the flies.

Before my astonishment was fairly over, a single team came on, carrying two individuals of a species which was new to me. They afterward turned out to be ladies in bloomer costume.

"Oh," I thought, "I see now; it's a first-class circus. The horse is all safe and I'll just sit on the rock and see the animals. Hallo, here comes a regular old 'ship of the prairie.'"

A huge circular, canvas-covered wagon appeared, drawn by four horses, and full of kettles, pans, bedding, and a grand miscellany of all sorts of utensils—in short, a peripatetic junk-shop. Another and another, and then a couple of chaps with blue shirts and two-foot straw hats on their heads.

"What *is* all this caravan, *anyhow?*" I asked.

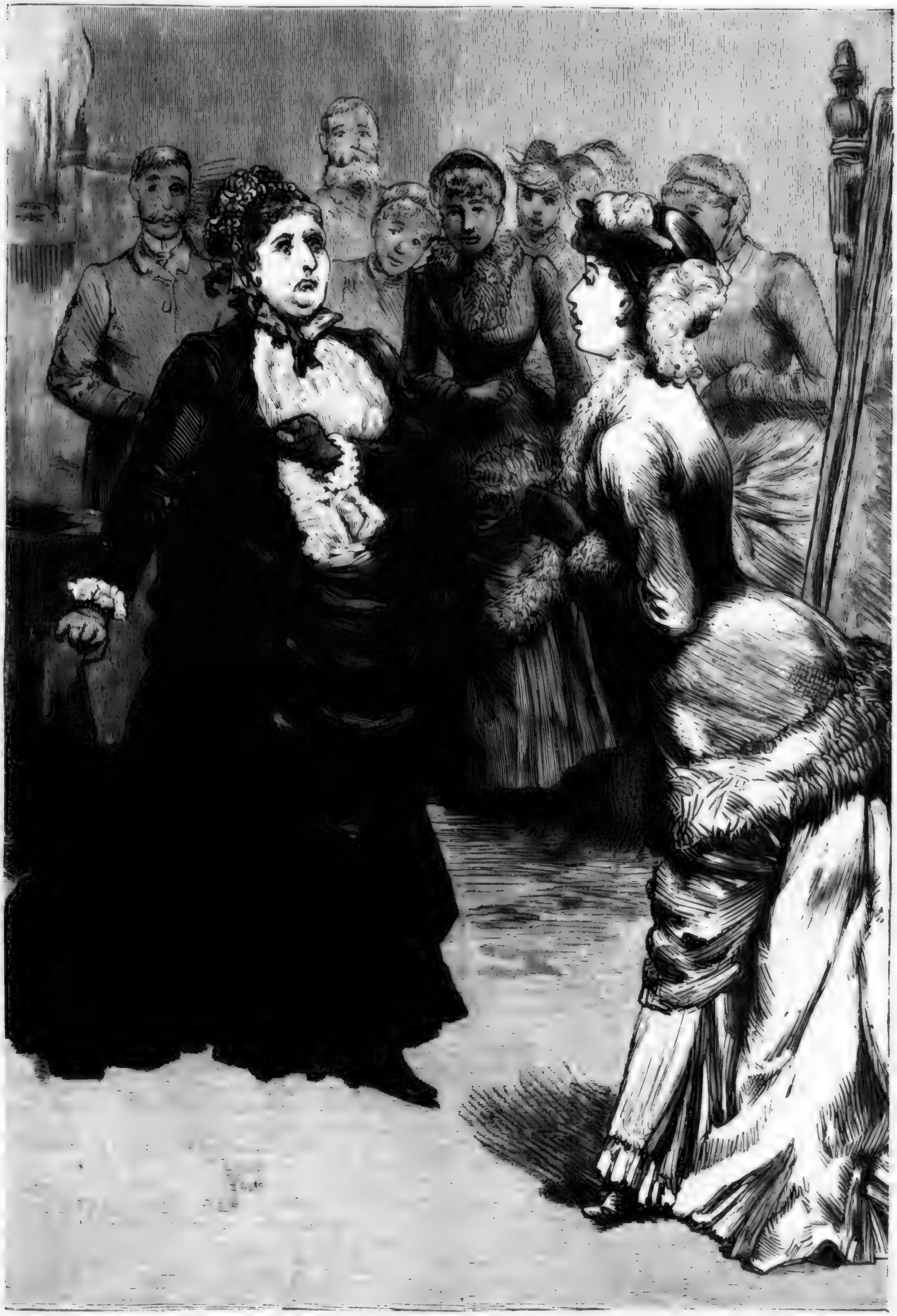
They looked at me with the utmost amazement.

"Why," one answered, "don't you know? We are pilgrims from the Gunnery," and passed on.

The "Gunnery"? Well, that was *news*, and while I was trying to scare up my latent geography, I was again edified by the approach of a brace of buxom girls in red-and-blue bloomer costumes.

"Ah, there are the bareback riders that jump through the rings!" I thought.

Two more covered wagons and a troop of young men and boys in every kind of costume, bearing fish-poles,



THE BISHOP'S DIFFICULTY.—"VERY ANGRY WORDS PASSED BETWEEN MRS. BOWERBANK AND LADY CARMINE."
SEE NEXT PAGE.

XUM

boxes, guns, and all sorts of queer things, and, directly behind them, a stalwart, venerable-looking gentleman, with a Scotch cap and portly figure. His very bearing indicated that he was the manager of the procession, and I accosted him.

"I say, my good sir, are you the boss of this caravan?"

"I am, sir," he replied, with a smile which revealed his kindly disposition. "I am the great Mogul of this extensive and motley pilgrimage."

"What's it all about?" I queried, seeing that he was disposed to be pleasant and communicative.

"Why," said he, "didn't you ever hear of the 'Pilgrims from the Gunnery'?" and before he had scarcely finished his reply, a little curly-haired youngster, in a blue flannel shirt, had run to his side and clasped his hand.

"Well, my little man, are you getting tired?" he asked.

"Kinder," responded the little fellow.

Whereupon he was lifted by the strong arms, and greeted with an affectionate kiss. With his arms around the neck of his guardian, he rested his head on his shoulder, and seemed ready to drop off to sleep.

"Your son?" I inquired.

"Oh, no, sir. This is a little Brooklyn boy, but I love him just as much as if he were my own," he said, and, with a turn, he was about to proceed with his curly-haired burden.

My curiosity had now reached a climax, and I pressed my questions thick and fast. While we were thus talking, we were continually passed by carriages and wagons, and dozens of young men on foot, and it was several minutes before the end of the procession reached us. My conversation developed facts of great interest connected with this quaint procession. The "Pilgrims from the Gunnery" were the members of a boarding-school up in Washington, Conn., kept by a loving and lovable old gentleman by the name of Gunn, and he it was whom I had recognized.

Every year it was his custom to make a trip to the seaside, generally at Milford, Conn., taking with him his entire establishment and many friends. He was now on his return, and expected to arrive home by evening, a distance of about fifteen miles.

The entire experience was so novel, and the people so interesting, and, above all, the good old gentleman so genial, so magnetically lovable, that I was instinctively drawn to him and resolved to follow in the wake of that caravan to the end, and see what sort of a place they came from. I followed, and as eventide fell upon us, we were winding up a hillside road leading to the little hamlet of Judea, now called Washington.

Here was the home of the "Pilgrims," and in the heart of the village a quaint structure was pointed out to me as "The Gunnery." I remained in that lovely town for one day, and its memories will linger long in my heart. Such a peaceful, charming spot it has never been my fortune to visit since, and I long to renew its associations.

I called upon Mr. Gunn the following morning, and he treated me with that kind courtesy for which he is proverbial, answering all my questions and giving me an insight into the most beautiful system of school government which it is possible to conceive, and which afterward formed the theme of a well-known story by the title of "Arthur Bonnicastle."

In the afternoon he harnessed up "Old White" and feasted my eyes on the matchless New England scenery in which the village is set. The town is situated on a hill about four hundred feet in height, and at its feet we beheld the quiet valley and the winding stream known as the Shepang. The country abounds in geological phenomena, which have been viewed with considerable interest by several prominent scientific men. Among these steep rocks a precipitous cliff, 600 feet in height, and Sampson's Rock, are the most worthy of especial note. The latter forms the subject of our illustration, and is considered as an excellent example of glacial action. The rock is about fifteen feet in height, and is of an oval shape. By some strange action in nature, presumably by the melting of a glacier, it has been deposited on the summit of a smooth rock and is there poised, as seen in the illustration. Many were the speculations in which these schoolboys were wont to indulge, of the probable result of precipitating that rock into the valley below, and, from my recollection of its slight bearing, a stout line would easily accomplish that result.

There it still stands, however, and is viewed by hundreds every year.

It is the favorite resort of picnic parties and moonlight excursions, and the view of the valley from its summit defies description. I shall long remember my short sojourn at Washington. W. HAMILTON GIBSON.

THE BISHOP'S DIFFICULTY.

By DUTTON COOK.

CHAPTER I.

THE Mausoleum Club is a grave, an august institution, distinguished, moreover, by its esoteric inclinings. Strangers are not admitted within its gates much beyond the door-mat upon the threshold; the uninitiated visitor is required, indeed, to wait with grooms and porters in the hall.

The members are personages—bishops, judges, counselors, royal academicians, professors, *savans*, and learned authors of solemn tomes, which many respect, if few read.

That these exalted creatures enjoy each other's society, and assemble and meet together at the Mausoleum with that view, is, perhaps, rather a matter of hope than of general belief or of fact.

It is not to be understood that the Mausoleum is a club of a particularly festive or congenial sort; it lays more stress upon its library than upon its kitchen. Nevertheless, its dinners have always been commendable, and it owns an excellent cellar of wines.

Of late years, notwithstanding the strenuous opposition of the bishops and the more solemn supporters of the club, a small smoking-room has been added to the building for the greater accommodation of the younger members; for the Mausoleum was originally erected in what may be called the pre-cigar period, when society held snuff-taking to be a delicate and polite proceeding, the while it condemned smoking as odious and vulgar.

In the coffee-room the Right Reverend the Lord Bishop of Babbicombe was dining plainly but plentifully. The fare was simple, the dishes were few; yet the meal was ample, substantial—perhaps even a trifle heavy.

In the course of his repast his lordship refreshed himself with brown sherry. The dinner removed, he sipped his way through a pint of the famous Mausoleum tawny port. He had always been a drinker of port—in moderation, of course.

The afterglow that waits upon a perhaps too solid dinner flushed his cheeks a little. Upon his brow there certainly rested the shadow of sadness or of mental discontent—almost, indeed, of distress. Dyspepsia might be present; but there was also disorder of a less physical sort.

Presently his face brightened a little. There had entered the coffee-room Mr. Sunderby, Q. C. Now, the bishop and Sunderby were upon very good terms. They had been schoolboys together, comrades at the university, and friends in after life.

Nor had their amity suffered—perhaps it had rather benefited—by the fact that, for some years past, they had seen but little of each other. There are so many old friends in the world who remain old friends simply because they seldom meet. Uninterrupted intimacy is particularly trying to the affection that is founded rather upon traditions of the past than upon present emotions.

"My dear bishop, this is an unexpected pleasure," said Mr. Sunderby, cordially.

"I am not often here," explained the bishop. "I am very glad to see you, Sunderby. I may say, indeed, that I was anxious to see you."

Mr. Sunderby was a stout gentleman, with a bald head and large, iron-gray whiskers. He was short-sighted, and a concave glass was invariably fixed in front of his right eye. He owned a rich, deep voice, and his heartiness of manner was said to have obtained for him many verdicts.

He practiced especially in the Divorce or Matrimonial Causes Court, and he had, without doubt, earned a large fortune by his skillful dealing with the conjugal difficulties of his fellow-creatures.

Sunderby was a man who attached considerable importance to his dinner, and when employed upon it did not care to have his attention directed toward other matters.

"I mentioned that I was anxious to see you, Sunderby," said the bishop, after an interval of silence.

"Just so, bishop," observed the barrister, indifferently, and with his mouth full.

"The fact is," the bishop continued, a little disconcerted by his old friend's apathy, and troubled with other thoughts, perhaps, "I want to speak to you for a few minutes privately—quite privately. I know how valuable your time is. I promise to trespass upon it but for a little while. Where can I find you alone, quite alone, and at liberty—and when?"

"Well, say the smoking-room in half an hour," said Mr. Sunderby, promptly. "I have no doubt we shall have it all to ourselves."

The bishop winced. He was not a smoker; it was many years since a cigar had been held between his lips. And then he had been active among the members who had opposed the addition of a smoking-room to the Mausoleum.

"Be it so," he said, however, with the air of a man swallowing a disagreeable pill. "I am in some difficulty; I may say, indeed, that I am in a state of very considerable distress, owing, in point of fact, to peculiar circumstances, which for the moment are entirely beyond my power to control. I cannot express myself more concisely or clearly just now. I stand much in need of your advice and assistance, Sunderby."

"I shall be happy, indeed, my dear bishop, if I can help you in any way," answered Mr. Sunderby, with alacrity, as he emptied his glass—for he was drinking champagne.

And then he turned to contemplate his friend. For the first time he observed the shadow upon the bishop's brow, and noted that a certain ruddy plumpness had departed from the bishop's comely countenance, leaving lines and hollows and pallor in its place.

"He must have lost many pounds' weight," mused Mr. Sunderby.

The prelate had been famed for his grand portliness of form; but it might be said that the ecclesiastical apron had now receded some inches, and forfeited much of its old noble amplitude of curve.

The bishop's figure had owned architecturally what Americans describe as a "swell front."

CHAPTER II.

THE bishop's nose twitched and wrinkled as he entered the smoking-room. It was a confined apartment, contrived apparently by appropriation of space in the attics of the club-house, originally destined for servants' bedrooms.

The air was heavy with the fumes of dead cigars and exhausted pipes.

The arrangements for ventilation were on an imperfect scale.

"What a place, and what a smell!" murmured the bishop, with an expression of disgust.

He seated himself near an open window. His sense of the discomfort of his situation urged him at once to commence his converse with his friend, the Queen's Counsel; yet he felt acutely the difficulty of saying what he had expressly ascended to the smoking-room to say.

He found himself gazing silently and steadily at Sunderby, the while that advocate carefully lighted a large cigar, and, having ordered a whisky-and-soda, ensconced himself in an easy-chair and assumed a listening attitude.

"Domestic trouble," the bishop began, sententiously, a certain tremor affecting his tones and his voice suffering from huskiness—"domestic trouble invades alike the cottage and the palace—even the palace of the prelate. That is my experience."

Mr. Sunderby closed his eyes with the air of one in church.

"I married for love."

Mr. Sunderby nodded; it was as though the story was familiar to him.

"And I can state with perfect confidence," the bishop continued, "that, until of late, great happiness has attended my union with Mrs. Bowerbank."

"You have much to be thankful for," observed the barrister.

"And I trust that I have been—that I am truly and unfeignedly thankful."

"There's a family, I think?"

"Three sons and five daughters," explained the bishop.

"And then, I apprehend," said Mr. Sunderby, with a levity of manner the bishop could not but disapprove, "a change came o'er the spirit of your dream?"

"Well, yes, if you like to state the case in that way. A change *has* come o'er the spirit of my dream, Sunderby; or, rather, I should say simply, I find a great, a deplorable, change in Mrs. Bowerbank."

"Women do change. They will, they can't help it; it's a way they have—*La Donna è mobile*, you know."

The bishop waved his hand, as though putting from him alike Mr. Sunderby's remarks and the smoke of his cigar.

"Mrs. Bowerbank's conduct has given me much uneasiness. My home is no longer the peaceful, happy, undivided home it once was. I must confess, indeed, that between my wife and myself there exists a great and

XUM

grave difference of opinion. We have quarreled desperately—that is the plain truth. How sad this is, how painful, how it troubles me even to speak of the subject, I need not say. But the question now arises, What am I to do? How is it to end? My wife and I are at strife—there is no prospect of peace being re-established between us. Which of us is to yield?"

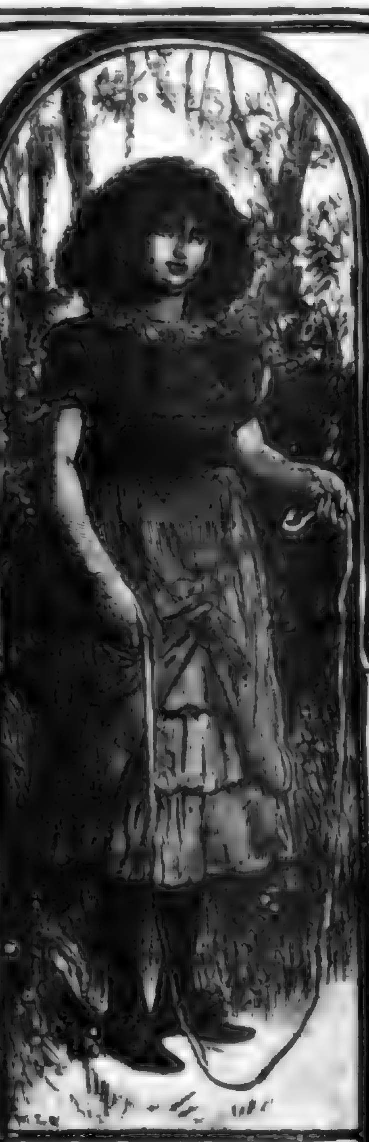
"The married have often to ask themselves that question," said Mr. Sunderby.

"But mine is no ordinary case," urged the bishop. "Consider my office—my position! Think how desirable it is to avoid a scandal in the matter. In these times there is so much publicity—everything becomes in turn the subject of discussion and chatter and ridicule in

A LIFE-PICTURE IN FIVE PANELS.

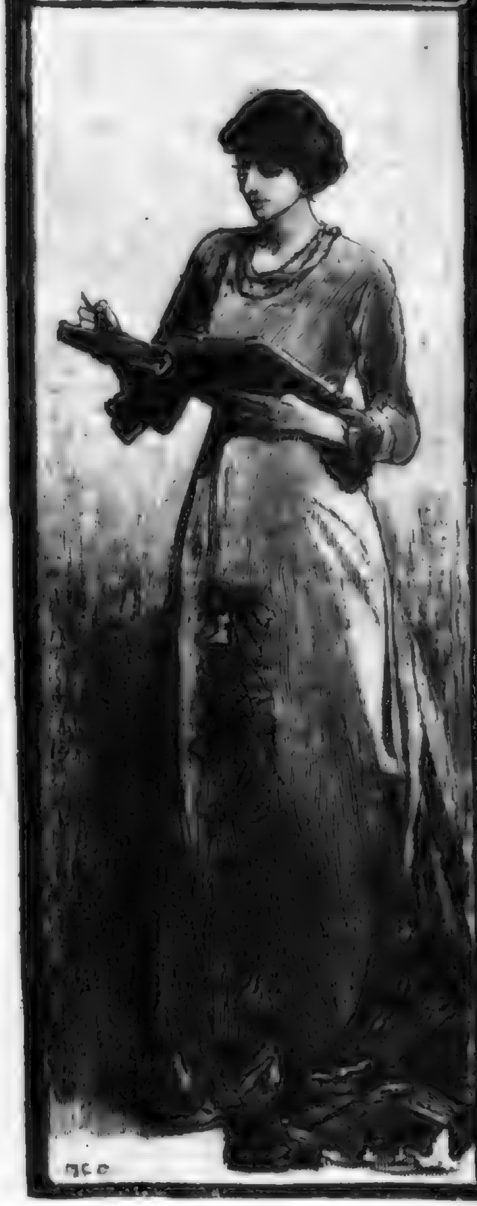
I.—A CHILD.

Like a gleam of sunshine breaking
through a cloudy sky,
Like a wayside blossom making
bright a wearied eye,
Like an April swallow bringing
hope upon its wing,
Like the voice of mavis singing in
the early Spring.
Like—oh! like all sweet surprises,
coming when or how,
Is the vision fair that rises clear
before me now.
Vision of a little maiden counting
years eleven,
One with cares already laden
eldest-born of seven,
But her cares bring naught of sadness, only make her strong,
For her heart is full of gladness,
and her life, of song.



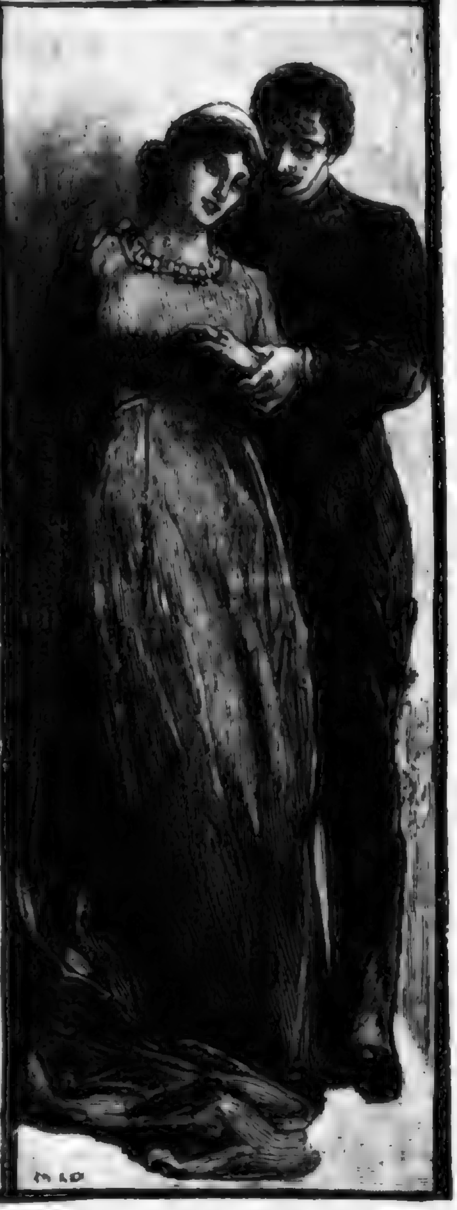
III.—A WIFE.

"They who over seas are ranging,
far as they may fly,
Not the mind within are changing
with the change of sky;"
"As the heart is, so the life is,"
live it where you will;
"As the daughter, so the wife is,"
both for good and ill.
Proverbs true of her whose story
I am glad to tell –
Record not of gaining glory, but
of living well.
Strange is now each life-surrounding — land, and home, and
name:
Claims increase on claims abounding—she is still the same.
"Safely trusting," justly "praising," is "her husband's
heart;"
Simplest duties she is raising,
doing well her part.



II.—A WOMAN.

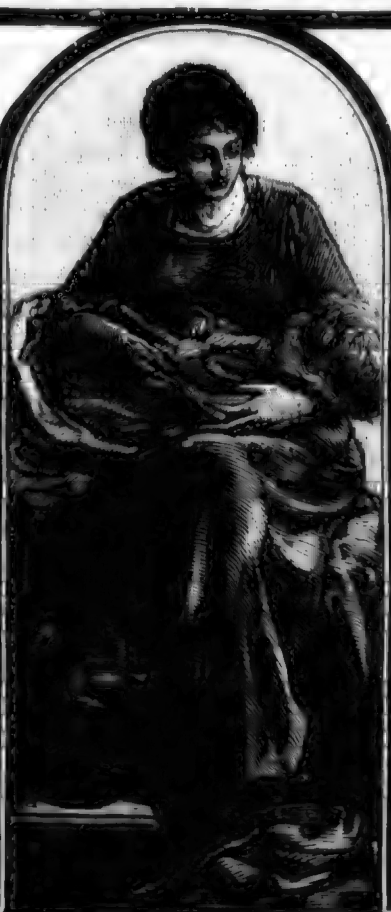
All the past is marked by stages
as a traveled way,
Memory turns over pages filled
from day to day,
Turn them now with rapid finger, time has journeyed on;
With the child we may not linger, for the child is gone:
Gone, but only as the petals fall
from setting fruit;
Molded, as are molten metals
higher ends to suit.
All the charm, revealed so
sweetly, all the varied good,
In the child shown, more completely crown her womanhood.
Service rendered "not by measure," but to meet the claim.
Duty done and reckoned pleasure—this her constant aim.



the newspapers. It would be very hard, Sunderby, to have my domestic troubles and afflictions advertised, so to say, in the public journals; made the subject of comment, of caricature, of chaff—I believe that is the current term—by the writers of leading articles, by the sharpshooters and jesters of the Press. I don't think I should survive such an outrage. And yet, surely, I am entitled to some remedy. My present condition of suffering is not to be borne. Your learning and experience, Sunderby, should enable you to point me a way out of my difficulties. You have had much to do with what are called Matrimonial Causes. You practice in the court which deals exclusively with such matters."

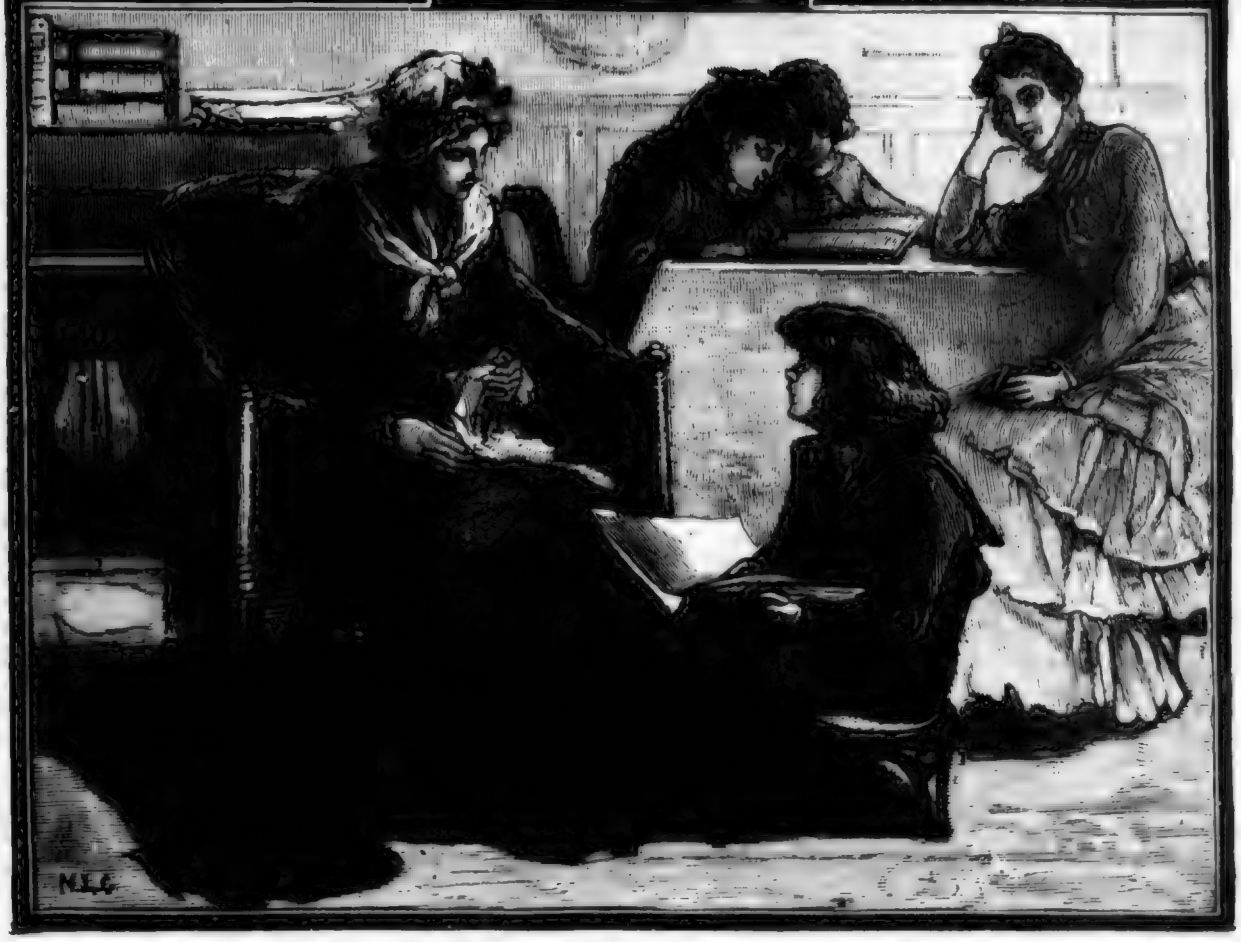
IV.—A MOTHER.

Of a circle wide the centre long the wife has been,
Steward of the treasures lent her, of a realm the queen;
Ruling with a sceptre royal, with a sceptre right,
Ruling over subjects loyal—owning right her might;
Mother of her children, knowing all the children's need;
Mother to her children, showing motherhood indeed;
Sharing in the children's troubles—half have ceased to be,
While the children's pleasure doubles with her sympathy.
In the hours of soft caressing, in the tasks of life,
She is blessed and she is blessing—as when child and wife.



V.—A HOME.

Look upon a landscape ending in a sunlit sea—
Hill, and vale, and water blending, all in union free;
Listen to the chorus swelling with the growing morn—
Nature's voices blithely telling that a day is born;
In the picture there is never dull monotony,
In the music there is ever perfect harmony.
Such the home with members many who in mind are one,
And the things affecting any are unfelt by none—
All possessing, using, sharing wisdom from above,
One another's burden's bearing—law of perfect LOVE.



"Just so. The court opens wide its doors; who will may enter. The Judge Ordinary affords what relief he can to one and all, under virtue of the Divorce Act of the 20th and 21st Victoria."

"That dreadful Divorce Act!" mused the bishop. "I opposed it strenuously, though I was only a country vicar at the time; I held it in absolute abhorrence. Yet now I seem to be taking counsel how I may avail myself of its provisions. Not that I really think I can ever persuade myself to enter as a petitioner the detestable court in which you have earned your fame, Sunderby."

"Just so, bishop," repeated the barrister. "But may one inquire for a few more particulars? I am sure you will understand that the question is not prompted by idle curiosity, or anything like it. But at present the case upon which you desire me to advise is scarcely before me. I must really be put in possession of further facts. What, for instance, is your exact complaint against Mrs. Bowerbank? What has she really done to offend you? May I ask so much?"

"Certainly. I will inform you as briefly as possible," said the bishop. He paused a moment, then cleared his voice, and began: "It has so happened that for some months past Mrs. Bowerbank has been resident in London. She has formed what I hold to be most unfortunate and undesirable friendships. I do not pretend to deny that these new friends of hers occupy good positions in society. They are, indeed, persons of rank, of wealth, of fashion and consideration; they are received, of course, everywhere, looked up to and respected by many. But they constitute a set, a clique, whose proceedings, whose tastes, whose opinions, I hold in great aversion. In plain terms, they are devoted to amateur theatrical exhibitions, and they are persuading my unfortunate wife to go upon the stage."

"To go upon the stage!" echoed Mr. Sunderby. "Why, Mrs. Bowerbank must be fifty, if she is a day!"

"No, Sunderby, she is not fifty," calmly explained the bishop, who desired that every justice should be rendered to his wife, her faults notwithstanding—"she is not fifty; indeed, she is not forty-five. And she is a well-preserved woman—she is still very beautiful. She was at one time quite famed for her beauty."

"But her figure?"

"Her figure," admitted the bishop, as though desirous of promptly closing the inquiry in that respect—"I admit that her figure, in its present state, is not suited to the part she has decided to assume at the Frolic."

"She is going to appear at the Frolic?" asked the barrister, in tones of amazement.

"There is to be a morning performance, as I learn, and she has decided to play *Juliet*."

A barrister struck dumb must be a rare spectacle. For the moment Mr. Sunderby appeared to be struck dumb. He found words at length—some words.

"Good Heaven!" he cried. "A bishop's wife playing *Juliet* at the Frolic! What next?"

"What next? You may well ask, Sunderby."

"We shall have a bishop playing *Romeo*."

"Please don't jest, Sunderby. Indeed, indeed, it is no subject for jesting."

"I beg your pardon, bishop. I spoke without thought. I did not mean to offend or pain you in the slightest degree. As you say, it is no subject for jesting. It is, of course, a very serious business."

"It is distressing to me beyond measure. For, you know, I have always been opposed to the stage. I have even preached against it; I may say that I have lashed it from the pulpit. But the question now is, What am I to do?"

Chapter III.

"You have reasoned with Mrs. Bowerbank?" inquired Mr. Sunderby.

"Is it any good reasoning with a woman?" the bishop demanded, bitterly. "Is it any good for a husband to reason with his wife? Is he likely to get anything for his pains, beyond tart and silly speeches, perverse answers, contradictions, ridiculous arguments, abuse and ill usage? But I *have* reasoned with Mrs. Bowerbank. I have reasoned, exhorted, expostulated, entreated, conjured, commanded, prohibited—I have exhausted my powers of speech, I have talked myself hoarse in addressing her upon this disgraceful subject—and all in vain. She is bent upon the thing. She is so mixed up with that dreadful theatrical set she first met at Lady Carmine's. They are all what is called stage-struck. They are all intent upon public exhibition of themselves. They are eager to sing, recite, act in public; anything so that they may appear upon the stage in the glare of the gas. They assume strange dresses, and put on wigs, and make up their faces—I believe that is the term they use. They are hand-in-glove with the strangest persons—professionals, they are termed—vulgar men and dubious women. They live in a theatrical atmosphere, the slang of the stage echoes all about them. The whole thing is to me a most dreadful and revolting shame and scandal. I sicken as I think of it. They are all mad, as it seems to me, and Mrs. Bowerbank is quite the maddest of them all. If I had the power I would lock her up in Bedlam to-morrow."

"The performances are public, then, and money is taken at the doors?"

"They pretend to act for charity," the bishop explained. "They make charity the excuse and the cloak for their vanity and their folly. Yet, the performances are professedly for the benefit of the poor, who are always with us, you know, and are especially remembered when the rich desire to amuse themselves."

"Twistleton's case would apply, I think," said Mr. Sunderby, after a minute's reflection.

"May I ask the nature of Twistleton's case?"

"It was heard in the House of Lords some years since. The Act of the 20th and 21st Victoria had not yet become law. It was the case of a wife afflicted with an unconquerable desire to embrace the stage as a profession, her husband being a clergyman. A separation by agreement had ensued. There were afterward very grievous charges of misconduct brought against the wife. It was held that the petitioner was not debarred of his remedy because of the separation, which was pronounced, indeed, to be justifiable under the circumstances, and accordingly judgment was given for the divorce. I doubt, however, whether it would be a sufficient answer to a wife's suit for the restitution of conjugal rights, the husband being a clergyman, to say that the complainant was passionately devoted to the stage."

"I do not think," said the bishop, "I could really bear to have Mrs. Bowerbank's conduct made the subject of discussion before a legal tribunal."

"I apprehend," said Mr. Sunderby, meditatively, "that there is no other charge against Mrs. Bowerbank except in relation to this passion of hers for the stage?"

"But surely that is a sufficient charge against her, Sunderby?" urged the bishop.

"Just so. But one hears so much, in the court I practice in, of more serious charges against wives."

"I think I understand," said the bishop, his face reddening, "and I would have you know, Sunderby, that

Mrs. Bowerbank is virtue itself; and, apart from this unfortunate failing or predilection of hers, call it which you will, she has borne herself exemplarily in all the relations of life. I have not a fault to find with her—she has been to me a faithful and affectionate wife, she has been to her numerous offspring a most admirable mother. When she married me I was but a curate. We have lived happily together for many, many years. It is indeed deplorable that this wretched cause of disagreement should now have arisen between us."

The bishop's eyes filled with tears.

"But surely," said Mr. Sunderby, genuinely sympathetic—"surely we can find some way out of this difficulty without going into court, or thinking of going into court, supposing a remedy were obtainable in that way. My dear bishop, you will excuse the warmth and the freedom of an old friend; but some *modus vivendi* must be discoverable between Mrs. Bowerbank and yourself in the present condition of affairs. The possibilities of approach and reconciliation cannot be wholly out of the question."

"Very violent and angry words have passed between us," confessed the bishop. "It is with deep pain I make this statement, Sunderby; but I feel it to be necessary. I have wholly failed to shake Mrs. Bowerbank's resolution. I have said and done all I could; but in vain. I have even tried bribery—I own it with shame. I offered her a valuable diamond bracelet—the handsomest money could buy. But she was not to be moved. She is determined to play *Juliet* at the Frolic, and play *Juliet* she will. Mrs. Bowerbank has all the obstinacy of her sex, and something more. She will appear as *Juliet* at the Frolic, and, as it seems, I cannot prevent her."

"There is one thing you might do," said Mr. Sunderby, after some moments' reflection.

"And what is that, pray?"

"Well, Mrs. Bowerbank may appear as *Juliet* upon one occasion, but it will be your own fault if she repeats the experiment."

"I don't think I quite follow you, Sunderby."

"When Mrs. Bowerbank plays *Juliet*, you go in the pit and help to hiss her off the stage."

"Hiss my own wife?"

"Why not? She is appearing on the stage contrary to your wishes and express injunctions. You pay your money at the door and form one of the public. You disapprove of the exhibition, and you signify your opinion in the usual manner. It is lawful to hiss in a theatre. Of course, you must take care to avoid the appearance of a conspiracy to interrupt the performance—you must not be guilty of what the law would call a riot. I would not advise, therefore, your arming yourself with a catcall, a gong, a bell, a horn, a rattle, or any noisy instrument of that kind; that might look like a predetermination to condemn in any case. But you can hiss freely, and, of course, you may have friends in the house who may be of your way of thinking, and who may join you in hissing Mrs. Bowerbank. A sort of church party might be formed against the performance, for no doubt your friends would be, in many cases, of your own profession. It would certainly have a curious effect," continued Mr. Sunderby, with the manner of one attentively studying some very strange picture of the mind, "if a certain portion of the Frolic were to be occupied by a crowd of ecclesiasts—bishops, priests and deacons—all hotly engaged in hissing Mrs. Bowerbank. I take upon myself to say that it would be quite the most startling *matinée* of the season."

The bishop was silent; he was, perhaps, too perplexed to speak.

The picture conjured up by Mr. Sunderby of the most startling *matinée* of the season was, to him, repellent and distressing; and it may have also occurred to him that possibly his friend was too much inclined to laugh at him.

"I think," Mr. Sunderby resumed, presently, "I would confine myself to hissing the *Juliet*. It might be awkward if you hissed other members of the company. Actors nowadays make speeches from the stage, and denounce the audience if they venture to disapprove the performance. By-the-way, who is to play *Romeo?*"

"As I understand, *Romeo* is to be played by a colonel of militia; the son of a Cabinet Minister appears as *Mercutio;* the *Friar* is to be represented by a County Court judge; and the starved *Apothecary*, by a member of the Junior Bar. It is quite what they call a strong cast. Only ladies and gentlemen of fashion and social position are to take part in the performance. Where is this absurdity to end, Sunderby? And yet, I own, I am in some measure to blame. It was I who first praised Mrs. Bowerbank's elocutionary powers—she had really a delightful voice, she was an admirable reader; I have sometimes wished that she could have read the lessons in Babbicombe Cathedral. Her manner, too, was most impressive—there was nothing of the theatre about it then. Little did I think that my approval of her efforts would have been viewed as an encouragement to her to go upon the stage! But how seldom it occurs to us to consider the possible consequences of our simplest words—our humblest actions!"

Mr. Sunderby checked himself; he was on the verge of saying Amen.

Chapter IV.

There was the sound of a footstep upon the stairs.

"Some one comes," said the bishop. "I will leave you now, Sunderby. I would not be thought a frequenter of this room. I am obliged to you for listening to me. I will not say that I have derived much comfort from your counsels, but that is not to be imputed to you as a fault. Some relief I have gained in giving words to my sorrows. In certain conditions of the mind there is advantage, I think, in mounting to the housetops—we are very near the roof, by-the-by—and confiding one's sorrows to the winds and the skies and even the chimney-pots. There is comfort sometimes in speech, even to deaf or unsympathetic ears, or even to inanimate objects. Good-by. God bless you, Sunderby."

And the bishop hurriedly quitted the smoking-room.

"Was there sarcasm in his last utterance?" Sunderby asked himself.

But he had little time to consider the question, for forthwith entered McAdder, the famous historian, who commenced in broad Scotch a vehement diatribe concerning the topics of the day.

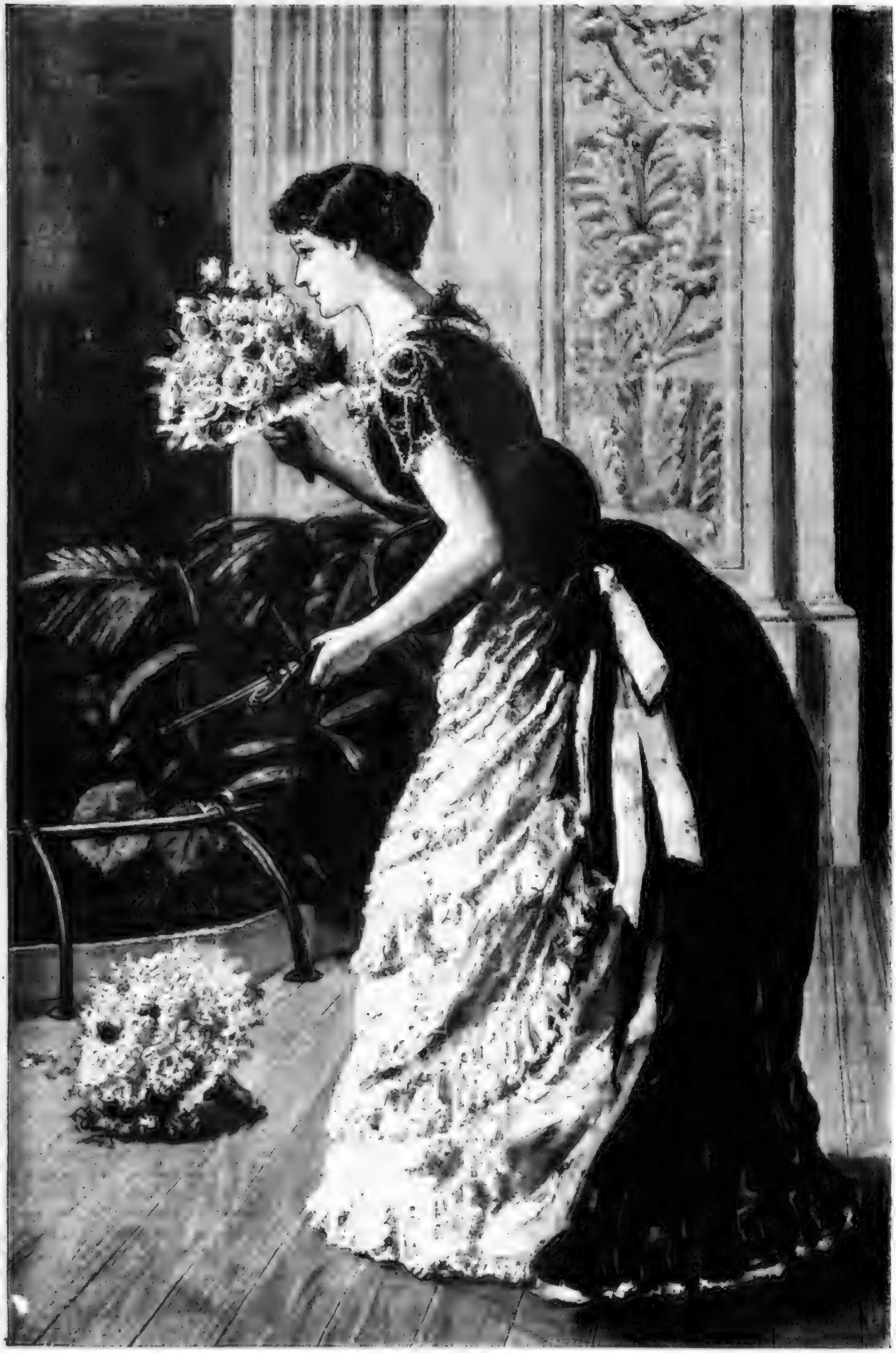
Sunderby lighted another cigar, and soon dense clouds of smoke encompassed him on every side.

Before long he was heard to laugh—not, of course, at anything McAdder had said; that was out of the question. The Queen's Counsel was laughing in his sleep.

He was dreaming of Mrs. Bowerbank's *Juliet.*

Chapter V.

Some days later, Mr. Sunderby received a letter bearing the Babbicombe postmark. The letter was, indeed,



THE SUCCESSFUL DÉBUTANTE.

signed "Babbicombe," and was dated from the palace of that cathedral city. The bishop wrote something to this effect:

> "My Dear Sunderby: We arrived here only yesterday, and I hasten to inform you of what has happened. After our last conversation, it will surprise you to learn of the change that has occurred in Mrs. Bowerbank's opinions and arrangements. I do not flatter myself that this has resulted from any appeal or expression of sentiment on my part. But Mrs. Bowerbank has quite decided that she will not appear as *Juliet* at the Frolic; she renounces, indeed henceforth, all thought of exhibiting herself upon the stage, either in public or in private. It seems she has quarreled with her theatrical friends, and that she is now upon very bad terms with them. I am given to understand that there was a very painful scene at the dress rehearsal of the tragedy. Disputes, I believe, are common among the players upon such occasions; but the conflict in which Mrs. Bowerbank engaged was of an unusually violent kind. There was, as I gather, something of a conspiracy to deprive her of the character of *Juliet*, and to intrust its impersonation to Lady Carmine. For some time considerable jealousy, it seems, has existed between Lady Carmine and Mrs. Bowerbank in relation to their histrionic abilities and efforts. The company generally appear to have sided with Lady Carmine--naturally, for they are among her most intimate friends. Mrs. Bowerbank was called upon in plain terms to resign the character of *Juliet*; it was intimated to her, however, that she might appear, instead, either as *Lady Capulet* or as the *Nurse*—parts, it was stated, decidedly better suited to her years and physical proportions. Of course, she refused to take part in the performance under such conditions. Very angry words passed between her and Lady Carmine, and all is now over between them. Mrs. Bowerbank has entirely severed her connection with her quondam theatrical friends. I am heartily glad of it, I need scarcely say. But this controversy, or quarrel, has been a great shock to her—has upset her very much. She is still suffering, but is very much better. She will never appear upon the stage, she avows; yet she hopes that, as a reader, she may be able now and then to entertain the public—for the benefit of the poor, of course. Indeed, she hopes to be well enough to appear next week at a penny reading, when she proposes to recite select passages from 'Paradise Lost.' The profits, if any, are to be given to our deaf and dumb asylum."

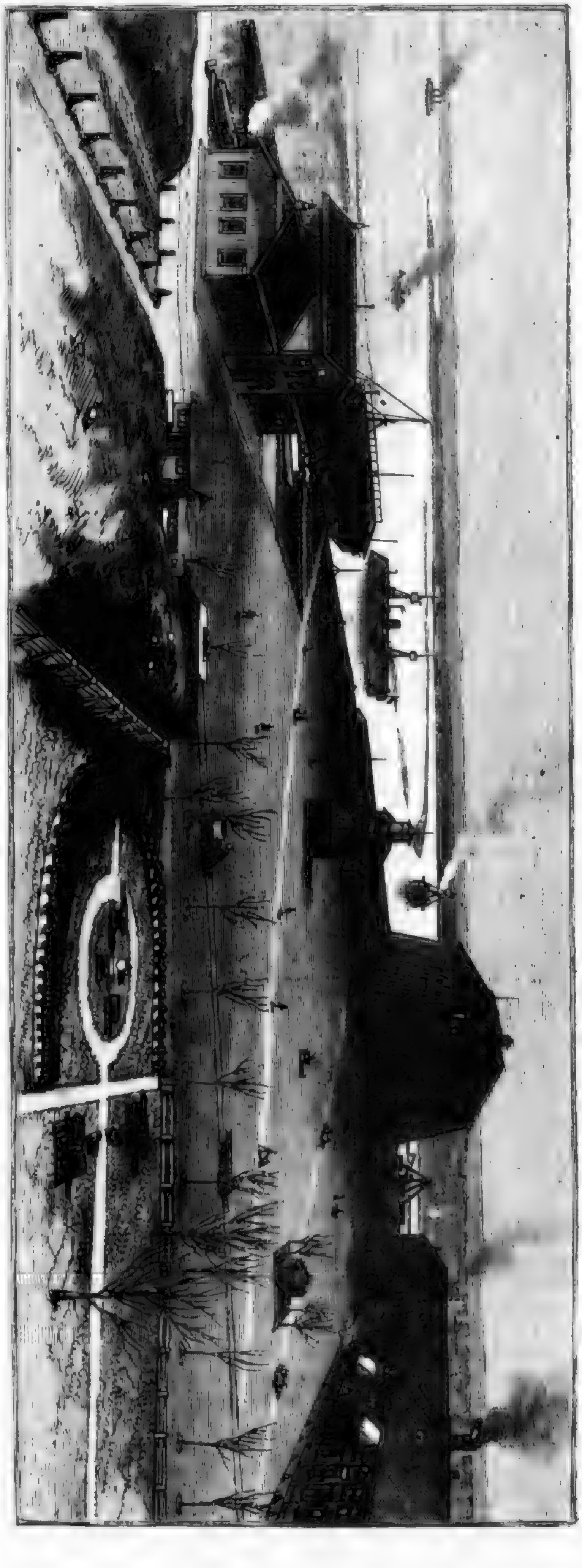
"Well," observed Mr. Sunderby, as, with a grin, he folded up the letter, "at any rate, the Bishop's Difficulty is over for the present."

THE MANUFACTURE OF BIG GUNS.

The Work in Progress at the New Naval Gun Factory at Washington.

In no instance is the improvidence of man's nature more strongly marked than in his refusal to heed the adage, "In time of peace prepare for war." He will sing the praises of heroes in past battles in never-ending song, will celebrate with religious fervor events by which the country has been saved as by a miracle, but is unwilling to guard against possibilities in the future by making them impossible.

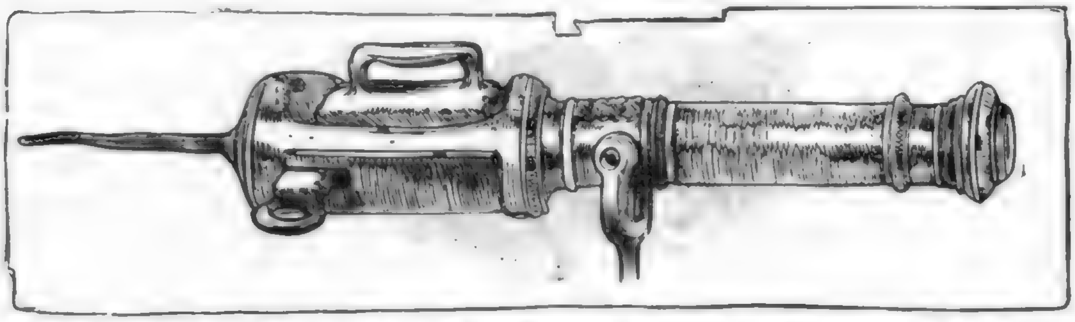
Our people particularly trust to that good luck and so-called Yankee ingenuity that has stood us in such good stead in past troubles. The time has come, however, when the machinery of war cannot be put together in a day, nor even in a year. We can no longer trust to the hasty invention of some implement that will



OLD GUN GRAVEYARD AND RIVER FRONT, WASHINGTON, D. C.

insure success in battles against our enemies; but, in the light of the experience of other countries as well as our own, we must accept the fact that preparations for war must be made on scientific principles, requiring a body of well-informed and experienced men, considerable time, and the expenditure of large sums of money.

So long as guns consisted of one large casting, and gun-carriages of a simple framework, the problem of how to supply the national demand was a very simple one, as has been shown in the casting of the twelve-inch breech-loading rifle for the United States Army at the South Boston Iron Works, where over one hundred tons of iron were poured in the molds. When finished, this gun weighed fifty-four tons. By increasing the number and size of furnaces, with a pit and molds large enough, this system could be carried on *ad infinitum*. The same thing is seen in the fifteen and twenty inch guns cast during the late war. But in the contest between armor and guns it has been found that to increase the size of guns beyond a certain limit would make them unwieldy even on shore, and much more so on board vessels, where the space is limited and lightness is a decided *desideratum*.



VERY ANCIENT BREECH-LOADING BRONZE GUN, USED BY CORTEZ IN THE CONQUEST OF MEXICO, CAPTURED BY THE UNITED STATES FORCES AT ALVARADO.

In order to keep pace with the thickness and improved condition of the material of which armor is now made, and at the same time keep within the limits of handiness, a series of measures have been resorted to. A powder is used which burns comparatively slowly, so that instead of the combustion being instantaneous, the powder continues to burn while the projectile (shot or shell) moves from its seat to the muzzle or outer end of the gun, thus acting as a constantly accelerating force and distributing the strain throughout the length of the gun; the size of the charge of powder and the bore of the gun being so proportioned that the greatest velocity is imparted to the projectile as it leaves the muzzle. In order to insure this proportion and fully utilize the energy of the powder, guns have to be very much longer; so long, that it is more convenient, and on board ship necessary, to load them from the rear or breech. Hence all modern naval ordnance is breech-loading. In order to get sufficient weight in the projectile and at the same time increase its capacity to penetrate, it is made long, with a pointed head. By rifling the bore of the gun, this form of projectile is kept in a horizontal position and strikes with the pointed end, as desired.

In order to resist the various strains to which guns are subjected, other qualities than hardness are necessary. So far, the best results are obtained by using steel as the building material, and employing a system known as building-up. That is, a number of pieces have to be made separately and the surfaces carefully turned down in a lathe. The groundwork of the gun is a long tube, which forms the bore and receives the rifling; over this tube are shrunk other tubes, shorter and thicker, which are called jackets and hoops. Both the inner and outer surfaces of these tubes have to be smooth. They are each bored from forged steel ingots, and carefully turned down on the outer surface, then heated and placed over the tube preceding it, and when cooled each binds the one underneath with a constant pressure. This pressure is greater as the outer tubes or hoops are put on.

In order to insure homogeneity in the steel, the ingots of which the various parts are made have to be forged, and in order to forge the larger masses necessary for the large guns, steam-hammers of immense weight are necessary. Hence we see that to fulfill all these conditions a very expensive plant is needed. No private corporation would be warranted in such an outlay unless a certain amount of work were guaranteed by the Government.

In order to fully investigate the subject, Congress passed an Act in 1883 directing the President of the United States to appoint a Gun Foundry Board, to consist of officers of the United States Army and Navy, "for the purpose of examining and reporting to Congress which of the navy yards or arsenals owned by the Government has the best location and is best adapted for the establishment of a Government Foundry, or what other method, if any, should be adopted for the manufacture of heavy ordnance adapted to modern warfare, for the use of the Army and Navy of the United States; the cost of all buildings, tools and implements necessary to be used in the manufacture thereof, including the cost of a steam-hammer or of apparatus of sufficient size for the manufacture of the heaviest guns." The Board appointed consisted of three army and three naval officers, Rear-Admiral Edward Simpson, United States Navy, President of the Board. They visited the establishments of France, England and Russia. They also sent letters to several of the steel manufacturers of the United States, and to companies engaged in gun-making. All estimates for cost of tools, machines, and other appliances, had to be based upon the cost of the same articles in foreign countries, as none of our manufacturers had had any experience in such work. After making careful estimates abroad and consulting with the steel manufacturers of the United States, the Board came to the conclusion that the best plan for the Government to follow would be to establish two gun factories, one for the Army at Watervliet Arsenal, West Troy, N. Y., and one at the Washington Navy Yard for the Navy; the yard to be turned over to the Ordnance Bureau exclusively for that purpose.

The principal work at this yard for some years has been in connection with that Bureau, and the plant on hand is such as to enable the Bureau to carry on the present work without making any radical changes.

These are not to be gun foundries, properly speaking, where the steel is made and forged, but factories where the various parts of the gun are finished off, and the gun built up. The steel forgings are to be furnished from the different steel manufacturers of the United States, thus encouraging the steel industry, and at the same time leaving a channel through which new ideas might come to combine with those of ordnance experts.

The steel for these guns is made in the ordinary Siemens open-hearth furnace, the metal being run into immense molds forming ingots weighing from 15,000 pounds for the inner tube of the six-inch rifle, to 21,486 pounds for the inner tube of the ten-and-a-half-inch rifle. The latter ingot is cast hollow. These ingots are cast short and thick, and are hammered out to the desired length and diameter, this system of manipulation being necessary to prevent the formation of gas bubbles and blow-holes within the mass of metal. Rolling would be cheaper, but with such large masses it is impracticable.

There is an establishment in the United States that can produce all the forgings for a steel gun of eight-inch calibre, and hoops of all sizes, except the largest and heaviest, and the breech mechanism and smaller forgings for all calibres. There are two other firms now able to produce the jackets and tubes and miscellaneous forgings for guns of six-inch calibre and under, and hoops for larger sizes. Even these establishments have had so little experience, and their plants are so limited, that a great deal of time is needed to produce these forgings. However, if there is any degree of certainty that the demand will be sufficiently large to warrant the outlay, these firms will respond, and be able in time to produce the necessary forgings for the largest sizes. It is estimated that they could commence delivering the heavier forgings for a ten-inch rifle in from eighteen months to two years after taking the contract, and the forgings for a twelve-inch gun could be delivered in from two and a half to three years. At present these heavy forgings have to be obtained abroad. Even under most favorable circumstances it will be two or three years before we can begin to turn out modern ordnance of the latest and most approved type fast enough to supply the demands of a large navy. This is a question of national importance, and should receive adequate attention and support from the nation at large. We see that in time of peace we must prepare for war. War-vessels are useless without guns, and all the new vessels built for the Navy have had to wait for their batteries. What would be the result if we were engaged in war, and needed thousands of guns of the most recent type, instead of enough to arm three or four cruisers with guns of small calibre? Supplying this steel will give new life to the steel industry, and as all steel furnished the Government has to undergo a severe test, depending upon the nature of the work it has to perform, outside parties will be able to form an idea of the quality of metal produced by different manufacturers, and manufacturers themselves will benefit by it, as these tests will show them wherein their methods of production are deficient

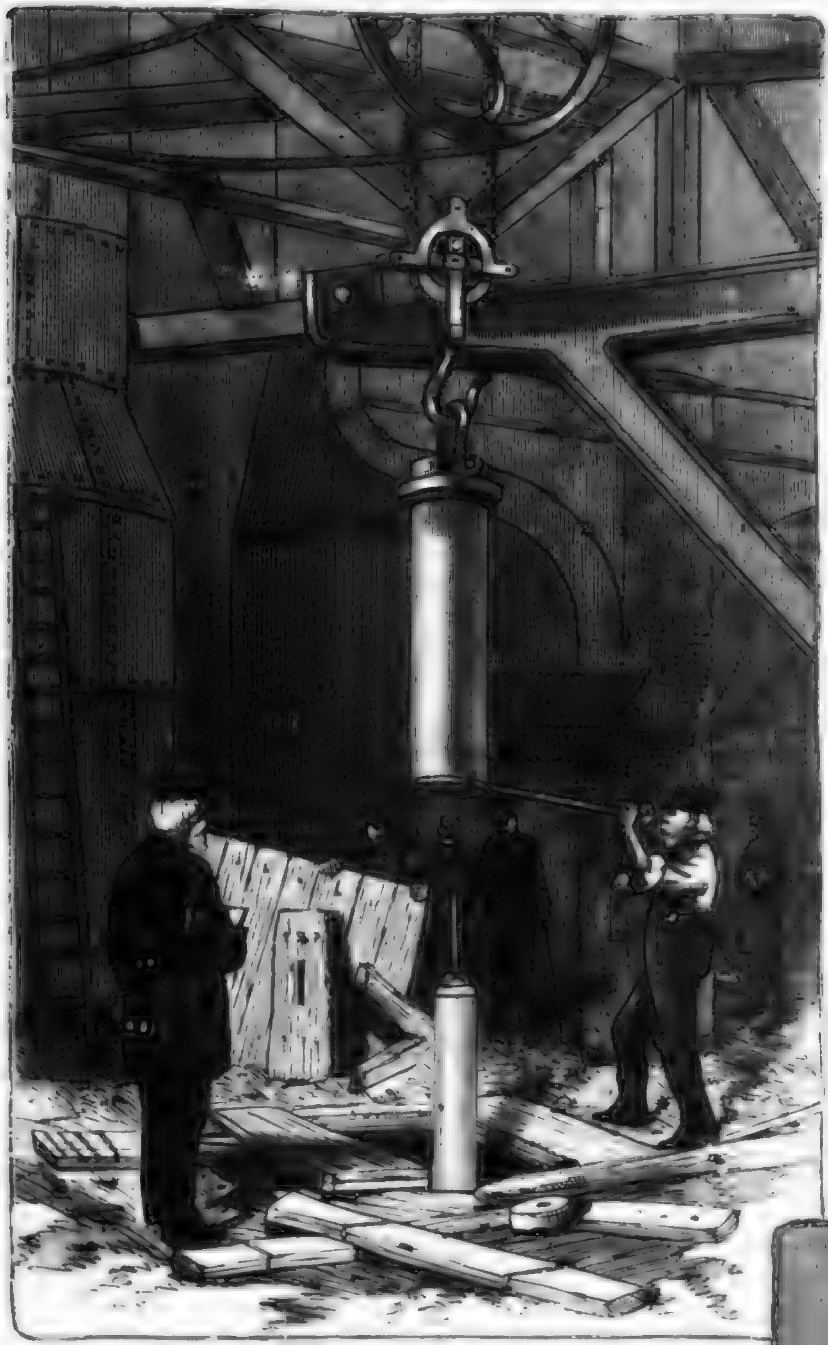
In order to handle these heavy guns with ease and rapidity, the system of mounting them has developed from a heavy wooden framework for a carriage to a delicate and intricate machine in which the recoil is taken up by having the carriage on an inclined plane, up which it has to run when the gun is fired, and also by hydraulic resistance. The designing and construction of these carriages require mechanical ingenuity of a high order. Guns that were formerly so mounted that it required twenty-five men to handle them can with modern carriages now be handled by eight men with greater ease and rapidity.

While not wishing to make any unfavorable comparison, it must be remembered that all ordnance work for the Navy is carried on by officers who have given the subject special study in addition to their other professional studies. We have no separate Ordnance Corps in the Navy such as exists in the United States Army and the British Navy. Yet many of the best guns, devices for handling and mounting them, as well as improvements in powder and armor, have been made by naval officers. The perfection of form in the smooth-bore shell gun was reached by the late Rear-Admiral Dahlgren, United States Navy. From what has been done with small appropriations, we are justified in arguing that with liberal ones for carrying on experiments, we could have led in many cases where we have had to follow.

All Boards appointed for the purpose of determining the site of the Naval Gun Foundry have reported the Washington Navy Yard as the most favorable location, and the Secretary of the Navy, realizing the importance of pushing forward the work as rapidly as possible, ordered, on the 1st of October of last year, that the navy yard should hereafter be used only as an ordnance yard, and all other departments should be removed to other yards. The advantages of Washington as a good location are obvious. It is sufficiently near the mining districts and the manufacturing establishments of the country, is at a safe distance from the sea, requires no additional fortification, but will in itself be a source of strength in defending the Capital. It cannot be said to invite an attack, as the Capital should as far as possible be rendered impregnable to an invading force. The ordnance yard being in Washington, the Chief of the Bureau of Ordnance can, to a great extent, give it his personal supervision, and thus avoid the delay frequently incident to long distances, where official correspondence has to be carried on in regard to any changes or improvements. Another advantage will be, that the large number of naval officers on duty in and near Washington can witness any interesting experiment that may be carried on from time to time.

According to the latest report from the Chief of the Bureau of Ordnance, a large number of the six-inch steel guns have been finished, and eighteen of them are ready for the new ships just being completed. These guns have stood the required firing-proofs at the naval proving-ground at Annapolis, Md., in a very satisfactory manner, an initial velocity of over 2,000 feet per second being obtained with standard powder and projectiles and moderate chamber-pressure. In fact, the highest initial velocity ever obtained has been developed in testing these guns.

The inner tube of one of these six-inch guns was found to be defective, and was "disassembled," or taken apart, so that the tube could be removed and a new one put in its place; thus, instead of losing the whole gun, only one part is lost, which can be replaced and the gun reassembled, or built up, with the same pieces. As has been previously stated, in building up these guns advantage is taken of the expansive property of metals when heated. The outer surface of the inner tube having been turned down in the lathe to the proper size, the inner surface of the jacket is bored out to a diameter of from one to two hundredths of an inch less than the exterior diameter of the tube upon which it is to go. Now, by heating this jacket, it expands sufficiently to allow it to slip on to the tube, which it binds with a constant pressure when cooled. The remaining jackets are shrunk on in the same manner, the inner tube being kept cool and the part to go on heated until sufficiently expanded to slip on easily. After the parts are all put together, the bore is rifled, and the powder-chamber, which has a little greater diameter than the rest of the bore, is reamed out. The breech is closed by a piece of forged steel called the breech-plug, which works on a tray in such a manner that when hauled out it can be swung to one side in loading; after loading it is swung back, pushed into place, and by



JACKETING A STEEL RIFLE-TUBE.

giving the handle one-third of a turn to the right, threads on the plug take in grooves cut in the gun, so that the plug cannot be blown out.

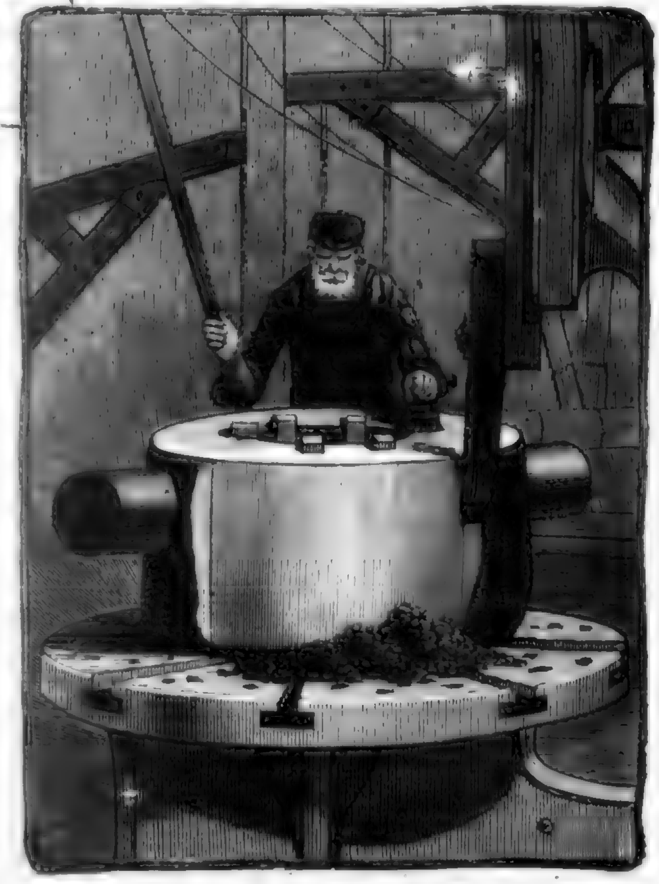
Two five-inch guns intended for the *Chicago* have been finished, and one tested. The first eight-inch gun has been finished, and found to give most satisfactory results. The two ten-inch guns are nearly finished. The hoops made in the United States for the heavy guns have proved very satisfactory. For the new cruisers we have eighteen six-inch, three eight-inch and two five-inch guns finished, and three six-inch and five eight-inch and two ten-inch guns well advanced. Ten or twelve of the six-inch guns have been made at private foundries.

The powder used with these new guns is Dupont's cocoa powder, which is being constantly improved, and with which the best results have been obtained. The attempt is also being made to replace iron with steel in the manufacture of shell, though so far the result has not been satisfactory, the casting not being homogeneous. It is believed, however, that the difficulty will soon be removed by a little more experience.

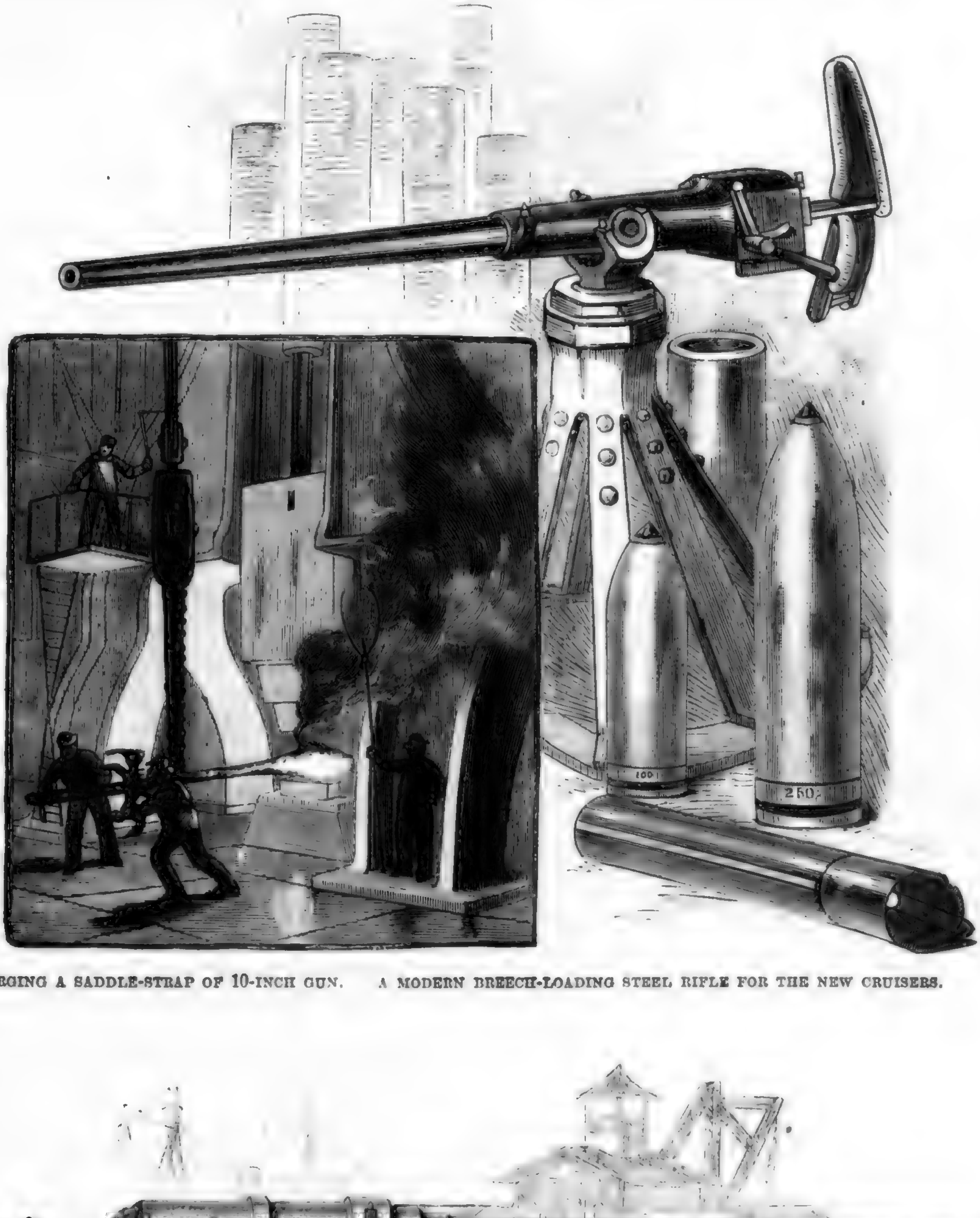
It is the intention to gradually increase the plant at the Washington Yard, until, with an ample supply of the proper material from steel manufacturers, the Government can supply the necessary ordnance outfit for vessels as fast as they are built, and also keep pace with any improvements that may be made either at home or abroad. Sooner or later all officers will be ordered to ordnance duty, and will have an opportunity to become familiar with all details of gun-making. A class of enlisted men are kept at work in the shops, who will in this way be prepared to have the immediate care of the guns and all appurtenances on board ship. So, with a good plant and a corps of well-informed officers and men, we will be better able to accept and take advantage of whatever changes are made in naval warfare. It is to be earnestly hoped that this comparatively new enterprise, upon which the safety of our country in case of a war with a foreign power almost entirely depends, will receive the good-will and encouragement of the entire nation, as no other course can so fully insure its complete success.

While vessels as large as the United States steamer *Minnesota* have been built at this yard, and a number of smaller ones, it could never have been made into a construction yard for vessels of modern type with advantage to the Government. The channel at present is too shallow, and it would necessitate constant dredging to keep it at the proper depth for vessels of average draught.

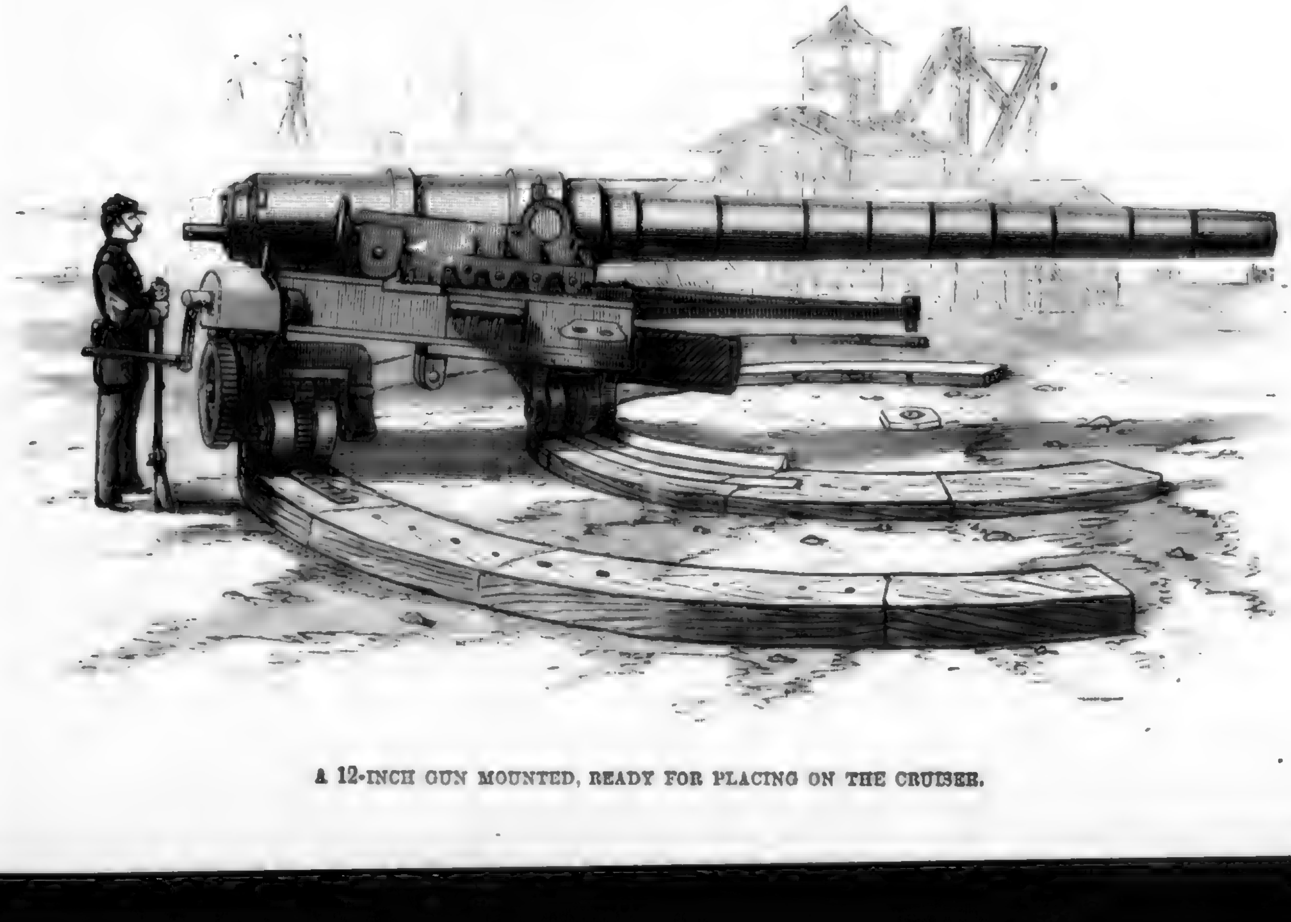
The plant for making marine engines was complete, and a large number of the boilers and engines of our war-vessels were built at this yard. The same work, however, can be carried on at any of the other navy yards without any additional expense to the



PLANING AND SHAPING A TRUNNION FROM THE ROUGH FORGING.



FORGING A SADDLE-STRAP OF 10-INCH GUN. A MODERN BREECH-LOADING STEEL RIFLE FOR THE NEW CRUISERS.



A 12-INCH GUN MOUNTED, READY FOR PLACING ON THE CRUISER.

Government, and a great deal of the machinery formerly used at the Washington Yard for that purpose can be utilized for ordnance work, thereby lessening the expense of the ordnance plant.

Thus far very little change can be noticed. The supplies belonging to other Bureaus not available for ordnance will be sent to other yards. Quarters will be provided for the officers on duty and attending instruction at the yard, and buildings will be constructed to accommodate new and important machinery, as required.

RECENT PROGRESS IN SCIENCE.

THE Philadelphia *American* contains the following interesting record of one of the foremost manufactories of the United States - the Baldwin Locomotive Works. This firm lately completed its 8,000th engine: "The first locomotive built at these works was turned out in December, 1832, and it took twenty years, until November, 1852, to build 500 engines. The second 500 were built in eight years, No. 1,000 being finished February, 1860. The next six years saw the third 500 built, No. 1,500 leaving the shop July, 1866. The fourth 500 were built in three years, by October 30th, 1869; the fifth 500 in two years; and the sixth and seventh 500 each in one year, engine No. 3,500 leaving November 20th, 1873. Business then slackened, three years being required to build the next 500, and two years the following 500; engine No. 4,500 leaving December 17th, 1878. Then trade improved, 500 engines being built in fifteen months, and 1,000 more in twenty-two months, while 500 more were finished in ten months; No. 6,500 leaving December 6th, 1882, and making a half-century for the works. The next eight months saw 500 more built, and before the close of 1884 No. 7,500 was turned out. Work again slackened, and nineteen months were required for the final 500 locomotives, No. 8,000 having just left the establishment. It is noteworthy that one-half the whole number, and these by far the heaviest and most elaborate engines that have been built, were turned out within the last ten years, the first 4,000 requiring forty-five years to build."

SMOKING AND HEART DISEASE.—In a report by Dr. Frantzel, of Berlin, on immoderate smoking and its effects upon the heart, it is stated that the latter show themselves chiefly by rapid, irregular palpitation of the heart, short breath, languor, sleeplessness, etc. Dr. Frantzel says that if the causes of these complaints are inquired into, it is generally found that the patients are great smokers. They may not smoke cigars rich in nicotine, but full-flavored cigars, imported from Havana. Smoking, as a rule, agrees with persons for many years; perhaps for twenty years and longer; although by degrees cigars of a finer flavor are chosen. But all at once, without any assignable cause, troubles are experienced with the heart, which rapidly increase, and compel the sufferer to call in the help of a medical man. It is strange that persons consuming cigars of ordinary quality, even if they smoke them very largely, are rarely attacked in that way. The excessive use of cigarettes has not been known to give rise to similar troubles, although it is the cause of complaints of a different nature. It is astonishing to find how many persons with advancing years discontinue smoking. As a rule, affection of the heart has caused them to abjure the weed. In all such cases the patient has found the very best cure, withou consulting the medical man.

CURIOUS WHITE IRON.—A writer upon the products and resources of Arkansas says: "The most remarkable and interesting mineral of all this region is the white malleable iron ore, regarding the existence and malleability of which a great deal of skepticism is said to exist. It is found in the corner of Howard County, adjoining the frontier of Montgomery, Polk and Pike. During the war, it is stated on good authority, the inhabitants of the vicinity used to take the ore as it was picked up from the ground, and in an ordinary blacksmith forge hammer it into horseshoe nails. Whether this be true or not, it is certain, and can be abundantly proved, that the ore can be taken, and, being heated in an ordinary blacksmith forge, can be welded and beaten into any desirable shape. The outcrop of this ore, as far as it has been explored, runs for two miles west to east, showing a width of from fifteen to thirty feet, with an unknown depth. There can be no doubt that this development of iron, in so pure and malleable a form, will some day be immensely valuable. The magic touch of a railroad will convert it into gold."

SUCCESS seems to have attended the curious experiment of grafting the skin of a frog upon a man, which was recently undertaken in Paris. The man's feet had been burned by molten iron. On one of the wounds Dr. Dubousquet Laborderie (the operator) put four grafts of human skin; on the other, four grafts from the skin of a frog. All of them took firm hold upon the wounds. The frog-skin grafts retained their peculiar color for a few days, afterward changing to the color of the human skin. The healing process progressed rapidly under the careful antiseptic preparations made, and there seems no doubt of complete success.

PUT gum camphor with your new silver, and it will never tarnish as long as the gum is there. Never wash silver in soapsuds, as that gives it a white appearance.

IT is one of the most remarkable properties of that wonderful product, paper, that it can be split into two or even three parts, however thin the sheet. We have seen a leaf of the *Illustrated News* thus divided in three parts, or three thin leaves. One consisted of the surface on which the engravings were printed; another was the side containing the letter-press, and a perfectly blank piece on each side was the paper that lay between. Many people who have not seen this done might think it impossible; yet it is not only possible, but extremely easy, as we shall show. Get a piece of plate glass, and place on it a sheet of paper; then let the latter be thoroughly soaked. With care and a little dexterity the sheet can be removed. But the best plan is to paste a piece of cloth or strong paper to each side of the sheet to be split. When dry, violently and without hesitation pull the two pieces asunder, when part of the sheet will be found to have adhered to one side and part to the other. Soften the paste in water, and the pieces can be easily removed from the cloth. The process is generally demonstrated as a matter of curiosity, yet it can be utilized in various ways. If we want to paste in a scrap-book a newspaper article printed on both sides of the paper, and possess only one copy, it is very convenient to know how to detach one side from the other. The paper when split, as may be imagined, is more transparent than it was before being subjected to the operation, and the printing ink somewhat duller; otherwise the two pieces present the appearance of the original if again brought together. Some time ago the information of how to do this splitting was advertised to be sold for a considerable sum. We now impart it to all our readers gratuitously.

IN Dr. B. W. Richardson's recent Cantor lectures on "Animal Mechanics," speaking of the mechanism of the heart, he described the number of the pulsations of the heart in different animals—in fish, frog, bird, rabbit, cat, dog, sheep, horse—and made a few comments on the remarkable slowness of the heart—forty strokes per minute—in the horse. Then the number of pulsations in man at various periods of life, and at different levels, from the level of the sea up to 4,000 feet above sea level, was brought under review, and was followed by a computation of the average work performed by the heart in a healthy adult man. The work was traced out by the minute, the hour and the day, and was shown to equal the feat of raising 5 tons 4 cwt. one foot per hour, or 125 tons in twenty-four hours. The excess of this work under alcohol in varying quantities formed a corollary to the history of the work of the heart; Parke's calculation showing an excess of 24 foot-tons from the imbibition of eight fluid ounces of alcohol. The facts relating to the work of the heart by the weight of work accomplished was supplemented by a new calculation, in which the course of circulation was explained by mileage. Presuming that the blood was thrown out of the heart at each pulsation in the proportion of 69 strokes per minute, and at the assumed force of 9 feet, the mileage of the blood through the body might be taken at 207 yards per minute, 7 miles per hour, 168 miles per day, 61,320 miles per year, or 5,150,880 miles in a lifetime of eighty-four years. The number of *beats* of the heart in the same long life would reach the grand total of 2,869,776,000.

PROFESSOR C. A. ASHBURNER, of the Pennsylvania Geological Survey, who has made a special study of the regions about Pittsburg yielding natural gas, has recently given the following explanation of its origin: It arises from the decomposition of forms of animal or vegetable life embedded in the rocks in suitable situations. The gas is not believed to be generated continuously, but merely to be stored in porous or cavernous rocks overlaid by impervious strata. When these collections are tapped, the gas is set free, but a new supply is not forming to take its place. The position at which the gas is found is very variable, depending upon the force of gravity and upon the position of the porous layer in which it is confined. It is considered hopeless in geological formation east of the Alleghanies. On general terms the gas may be described as a mixture of hydrogen, nitrogen and marsh gas, with occasional higher carbon compounds; but different wells vary in the character of their product.

FLOATING bricks are now being manufactured in France, the material of which they are composed being a kind of earth found in Tuscany, consisting of fifty-five parts of sandy earth, fifteen of magnesia, fourteen of water, twelve of alumina, three of lime and one of iron. It exhales a clay-like odor, and when sprinkled with water, throws out a light, whitish smoke. It is infusible in the fire, and though it loses about an eighth part of its weight, its bulk is scarcely diminished. Bricks made of this substance resist water, unite perfectly with lime, are subject to no alteration from the heat or cold, and the baked differ from the unbaked only in the sonorous quality which they acquire from the fire. The strength is a little inferior to that of common bricks, but much greater in proportion to their weight.

TO PURIFY water by a process promulgated by a Mr. Booth of Birmingham, put in it a neutral solution of bisulphate of alumina, in the proportion of one ounce to 435 gallons. The sulphuric acid of the sulphate decomposes the bicarbonate of lime in the water, and forms an insoluble sulphate of lime instead. The hydrate of alumina being set free, forms with the organic matter in the water another insoluble compound. Both these fall to the bottom, and the remaining freed element, carbonic acid, lends an agreeable quality to the water.

THE latest application of the electric light to new uses is found in the success which has attended one of the lecturers in the University of Berlin, who employed an electric lamp of 4,000 candle-power for the projection of microscopic sections upon a screen, aided by a magnifying lens of 6,000 or 8,000 diameters. A very satisfactory definition was obtained, though this has not hitherto been possible with the calcium light ordinarily employed.

ENTERTAINING COLUMN.

Is it physically possible to sit in a circle and *act on* the square at the same time?

Forgive and forget. When you bury animosity, don't set a stone up over its grave.

A sailor, after listening to a young woman who talked a great deal, spoke of her as a "wind-lass."

"Well, how do you like school, Tom?" asked Bob. "I don't like it. They make you do things you don't want to."

"Do you take kindly to menial service?" asked a lady of a nurse. "Well, yes; but I should prefer the hymeneal," she answered.

"You need better air," said the doctor to a poor but proud invalid lady of maiden age. "Ah, doctor, then please send me round some millionaire."

A professional maxim for lawyers: Whatever you do, do it with your might. Many a member of the profession has made a fortune by working with a will.

"A woman is keeping in a book a list of things which she ought to purchase but cannot afford to procure. She calls the book her ought-to-buy-ography.

"Why do you publish so many records of crime?" asked a gentleman of the late Horace Greeley. "Because they are the *sinews* of the paper," was the reply.

An old bachelor, who is not at all posted as to the fashions, says he would "like to know what the difference is between a traveling dress and a walking suit."

Milton was asked by a friend whether he would instruct his daughters in the different languages. His reply was: "No, sir; one tongue is enough for a woman."

In the Kitchen.—A pleasant kitchen is a cheerful, homelike place, and I'm glad that decorative art is peeping into it at last, as well as in the parlor and the bedroom.

"Why are you so precise in your statement? Are you afraid of telling an untruth?" asked an attorney of a witness in a police court. "No, sir," was the prompt reply.

"Women seldom stop to think," snarled a cross-grained husband. "True enough," said his wife; "but you might have added, they never fail to stop and talk."

"Were you ever in an engagement?" inquired an innocent rustic of a militiaman. "Yes, one," replied the son of Mars; "but *she* sued me for breach of promise."

A fashion article says: "Plush is used in combination with faille for elderly ladies." For elderly ladies, of course; in the bright lexicon of youth there's no such word as fail.

"You seem to be in the clouds, Mr. Pegasus," said a friend to an absent-minded verse-writer the day after the class dinner. "I certainly do feel like thunder," was the weary reply.

A barrister observed to a learned brother in court that he thought his whiskers were very unprofessional. "You are right," replied his friend; "a lawer cannot be too barefaced."

Butcher (to young housekeeper): "I have nothing left, mum, but a hind quarter of lamb and liver." *Young Housekeeper:* "Very well. You may send a small hind quarter of liver."

More Subjection of Man.—"Yes," she said to her bosom friend, "I always obey my husband; but I flatter myself that I have something to say about what his command shall be."

A little girl was sorely perplexed a short time back. "Eve came after Adam, didn't she?" was her question. "Then, surely," she argued, "Christmas Eve ought to come after Christmas Day."

Quite Excusable.—"I beg a thousand pardons for coming so late," said a gentleman to his hostess. "My dear sir," replied the lady, graciously, "no pardons are needed. You can never come too late."

In the Peshawur Cemetery, in India, is the following amusing epitaph: "Sacred to the memory of Rev. ——, missionary, age —, murdered by his chowkidar. 'Well done, thou good and faithful servant.'"

Once a teacher in a school in Jamaica observed a huge blot of ink on a boy's copybook. "What is that?" he demanded. "Sure, I think it's a tear, sir." "A tear? How could a tear be black?" "Sure, I think wan o' the colored boys dropped it, sir!"

A girl, in a moment of pique,
Gave her lover a slap on the chique:
Not a word did he say,
But he left her that day,
And didn't go back for a wique.

The unkindest thing that has recently been said about the legal profession is embodied in the remark made in a French provincial court the other day to a lawyer who was called as a witness. "Look here, Brother X.," said the counsel; "just lose sight of your professional character for a moment, and tell us the truth."

A man who had a scolding wife, being asked what he did for a living, replied that he kept a hot-house."

"Yes," said Fenderson, "Miss Forte plays beautifully. I don't know anything about music myself, but I know she's a splendid player, because all the other players say her music is just horrid."

An austere-looking lady walked into a furrier's and said to the man: "I would like a muff." "What fur?" "To keep my hands warm, you idiot!" exclaimed the lady, crushing him like a thunderstorm.

The Tomb of Love.—"Mr. Smith," said a lady at a fair, "won't you please buy this bouquet to present to the lady you love?" "That could not be," said Mr. Smith; "I have no sweetheart. I am a married man."

Diner: "Here, I thought you said this was lobster croquette." *Waiter:* "I beg pardon, I thought it was; I see that I made a mistake, I guess it is sweetbread." *Diner:* "No, it isn't sweetbread; it's some kind of meat."

A French investigator has discovered that the character of a person's dreams depends, in a great measure, on which side the sleeper lies. The dreams of a lawyer, then, who habitually lies on both sides, must be very much mixed.

A scientific man explained to his little daughter that the days in Summer were longer than in Winter, because heat made everything expand. But he could not, on the same principle, explain the length of the nights in Winter.

A bookbinder said to his wife at their wedding: "It seems that now we are bound together, two volumes in one, with clasps." "Yes," observed one of the guests; "one side highly ornamented Turkey morocco, and the other plain calf."

Old Gentleman (putting a few questions): "Now, boys—ah—can any of you tell me what commandment Adam broke when he took the forbidden fruit?" *Small Scholar* (like a shot): "Please, sir, th' worn't no commandments then, sir!"

A little boy was asked by his uncle if he wanted some flowers, and he replied: "I don't care if I do." The uncle said: "I never give flowers to boys who don't care." Whereupon the urchin responded: "I don't care if I do; but I do care if I don't."

Wanted Oiling.—A bright little three-year-old, while her mother was trying to get her asleep, became interested in some outside noise. She was told it was caused by a cricket, when she sagely observed: "Mamma, I think he ought to be oiled."

A bride who was married a month ago says she makes her husband confess in the evening any wrong act he may have committed during the day. Thus far she has got him to acknowledge that he bet on the wrong horse, and twice ate pie with a knife.

Young man who has been jilted and a friend are in a comfortable room. *Sympathetic Friend:* "Good quarters these, old fellow; you ought to be satisfied with them." *Jilted Bachelor:* "Yes, I'm satisfied now with my quarters. They are good enough. What I want is a better half."

"Oh, my friends, there are some spectacles that a person never forgets!" said a lecturer, after giving a graphic description of a terrible accident that he had witnessed. "I'd like to know where they sell 'em," remarked an old lady in the audience who is always mislaying her glasses.

Teacher (instructing a class of young girls): "I told you, young ladies, at the last lesson, that man's brain is larger than woman's. What would you deduce from the fact, Miss Smith?" *Pupil:* "That with the brain, as with many other things, all depends, not upon the quantity, but the quality."

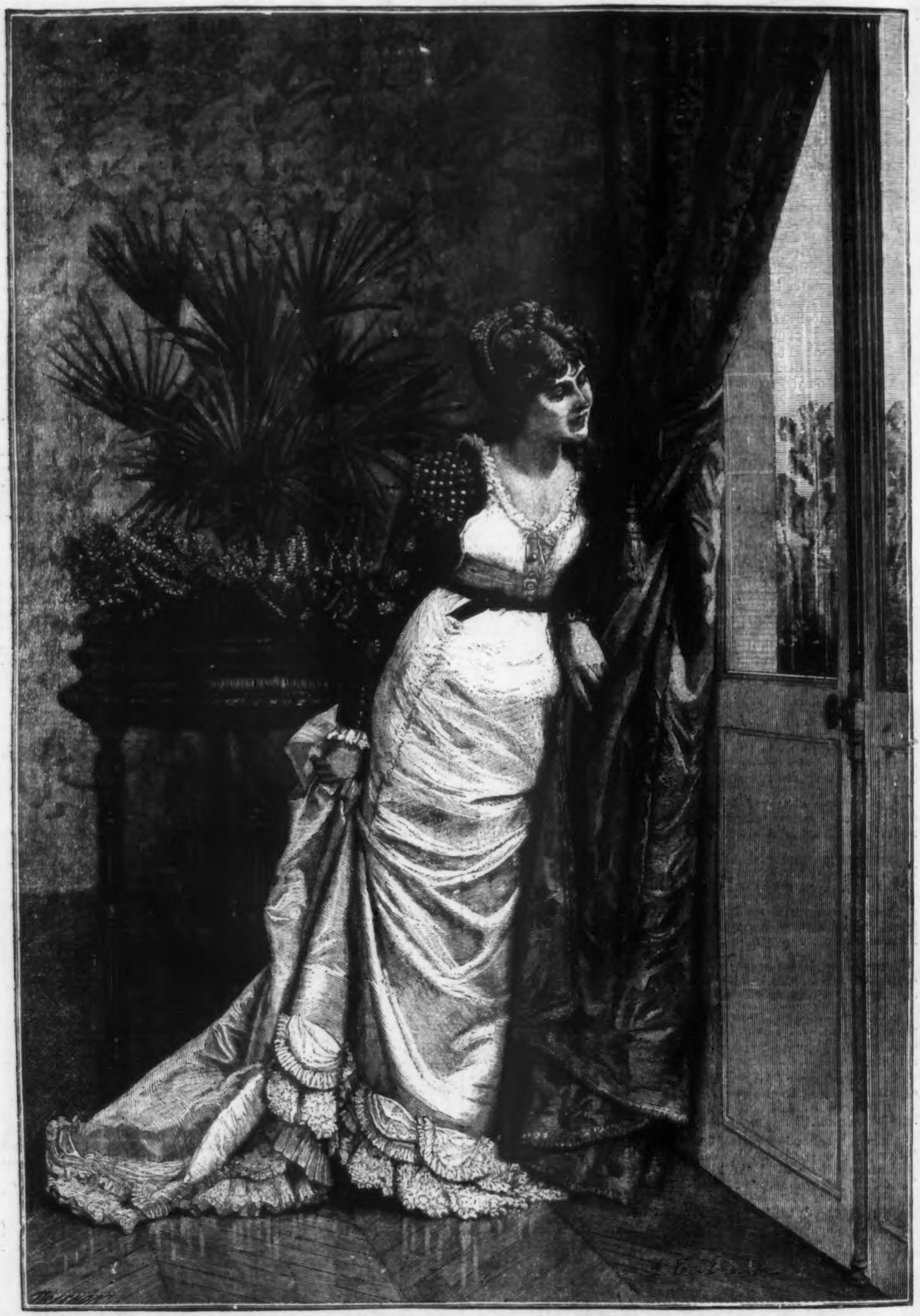
The most prudent man on record was he who, when retiring at an hotel and finding only four matches in the matchbox, for fear that they might be wet and so prove useless in case of emergency during the night, carefully tested them one by one, blew them out in turn, and tranquilly lay down to rest.

A Boston artist tells this story of Whistler and Oscar Wilde, who has the reputation of borrowing Whistler's bright speeches. Having heard the artist say an unusually good thing, Oscar exclaimed, deploringly: "I wish I could have said that." "Oh," replied Whistler, derisively, "but you know you will say it."

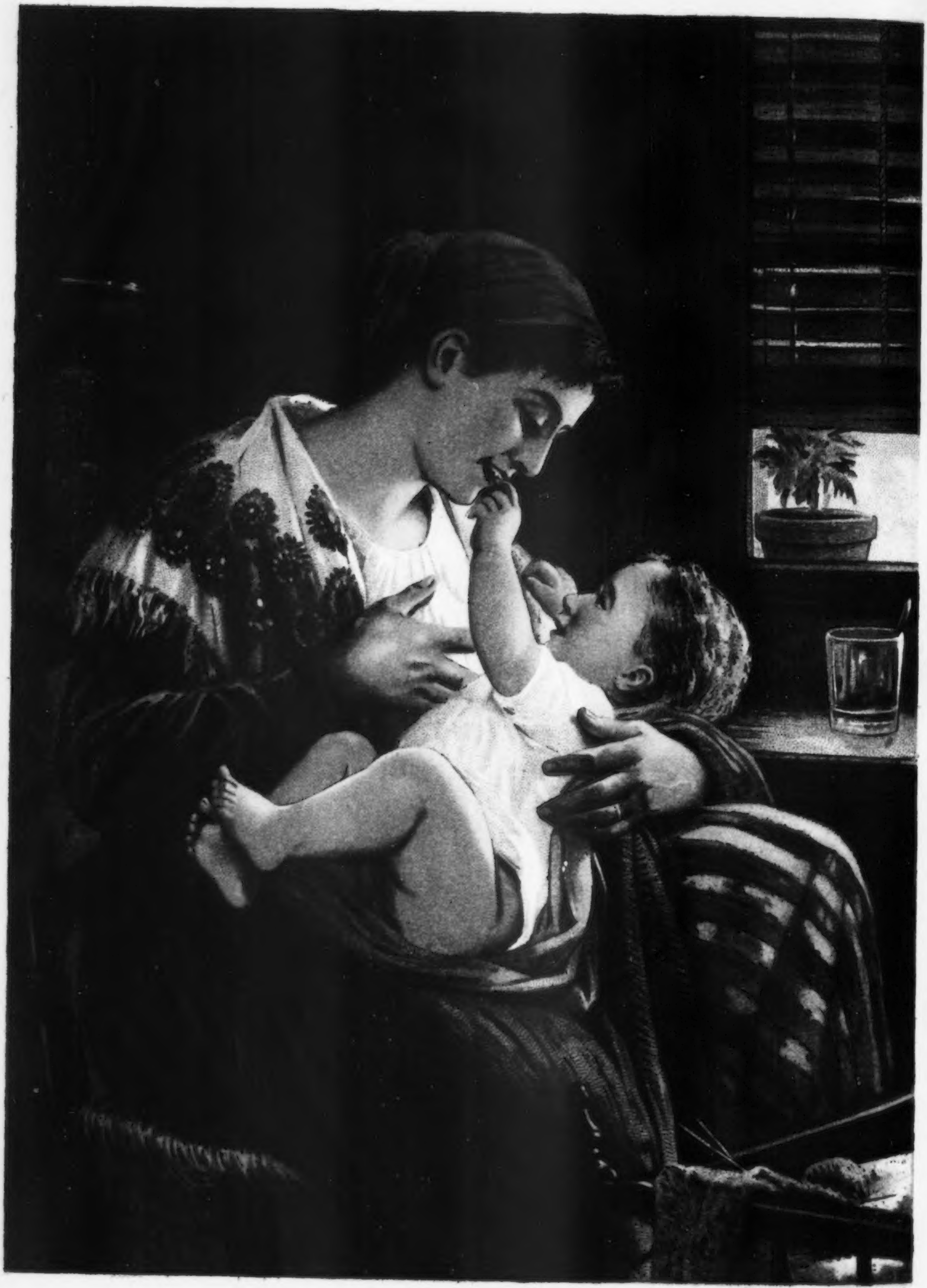
Three tailors established themselves in the same street in Glasgow. The first wrote on his sign, "The best tailor in this town." The second adopted as his motto, "The best tailor in the world." But the third, who was the cleverest of the lot, got away with them all by putting on his sign, "The best tailor in this street."

It is said that once when Mr. Clemens (Mark Twain), at the solicitation of his wife, called on Mrs. Stowe, he was so absent-minded as to put on neither collar nor necktie. On Mrs. Clemens remonstrating when he returned, he said that he would make it all right, and accordingly sent a collar and a tie of his to Mrs. Stowe in a box.

Miss Longout: "Mamma, I think I'll accept young Snoopkins. He seems to be the best thing I have on the hooks at present." *Mrs. L——:* "Why, my dear, you have plenty of time before you." *Miss L——:* "You're mistaken, mamma; I am failing rapidly. I know, because I have heard several people say lately that I am growing younger and prettier every day. I have no time to lose."



WATCHING BABY.—FROM A PAINTING BY TOULMOUCHE.



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KING BABY.